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ISSUE 15 NOVEMBER/DECEMBER 2019 £5.99

# Mercedes

DRIVER

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**A45 & CLA45**

FIRST DRIVE

**65**  
YEARS OF  
W198  
300 SL



PLUS

**C204**  
**C63 AMG**

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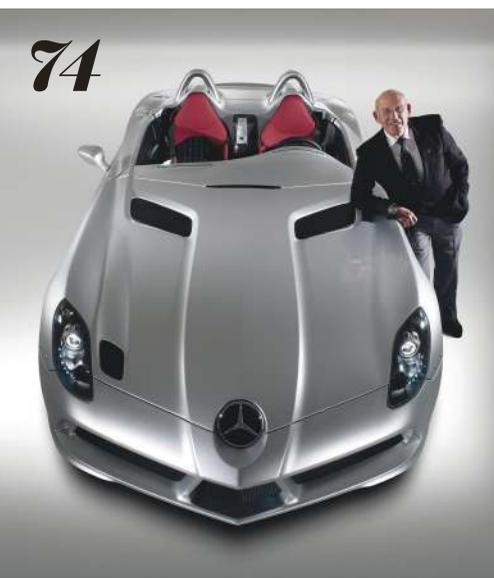
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68



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74



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# Mercedes

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Kelsey Media, Cudham Tithe Barn,  
Berry's Hill, Cudham, Kent TN16 3AG

## EDITORIAL

**Editor:** Dan Furr **Twitter:** @DanFurr

**Email:** md.ed@kelsey.co.uk

**Art Editor:** Lee Caple

**Contributors:** Dan Sherwood, Emma Woodcock,  
Sharon Horsley, Richard Gooding, Sudhir Matai,  
Dave Humphreys, Chris Wallbank, Daniel Bevis,  
Neil Furber, Viktor Benyi, Freddie Spender

## ADVERTISING

**Talk Media Sales**

**Managing Director:**

David Lerpiniere, 01732 445325

david.lerpiniere@talkmediasales.co.uk

**Account Manager:**

Joshua Wingfield, 01732 447007

joshua.wingfield@talkmediasales.co.uk

## PRODUCTION

**Production Manager:**

Melanie Cooper, 01733 362701

**Production Supervisor:**

Samantha Tomkins, 01733 362705

## MANAGEMENT

**Managing Director:** Phil Weeden

**Chief Executive:** Steve Wright

**Finance Director:** Joyce Parker-Sarioglu

**Retail Distribution Manager:** Eleanor Brown

**Audience Development Manager:** Andy Cotton

**Subscription Marketing Manager:** Debra Hagger

**Events Manager:** Kat Chappell

**HR & Operations Manager:** Charlotte Whittaker

**Senior Print Production Manager:** Nicola Pollard

**Print Production Manager:** Georgina Harris

**Print Production Controller:** Kelly Orriss

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## CONTACT US

**UK subscription and back issue orderline:**

01959 543 747

**Overseas subscription orderline:**

+44 (0) 1959 543 747

**Toll free USA subscription orderline:**

1-888-777-0275

**UK customer service team:**

01959 543 747

**Customer service email address:**

[subs@kelsey.co.uk](mailto:subs@kelsey.co.uk)

**Customer service and subscription postal address:**

Mercedes Driver Customer Service Team  
Kelsey Publishing Ltd, Cudham Tithe Barn, Berry's Hill,  
Cudham, Kent, TN16 3AG, United Kingdom

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# OVER AND OUT!



**WELCOME** to the fifteenth and final issue of *Mercedes Driver*.

Yes, you read that correctly!

This is the last time I'll be welcoming you to our humble

bi-monthly. In recent months, I've been pleased to be on the receiving end of a high number of emails and social media DMs congratulating myself and the *Mercedes Driver* team for transforming the magazine into the best-looking and most content-rich Mercedes-themed title on newsstands. These qualities are reflected in a sharp rise in sales and subscriber numbers. Even so, from a commercial perspective, the Mercedes market is a tough nut to crack, and with two other magazines dedicated exclusively to the three-pointed star already on sale, not to mention established publications produced by two very able clubs catering to the same audience as *Mercedes Driver*, there's an argument that we were too late to the party. Not that any of this

is going to stop us from going out with a bang, as demonstrated by the awesome cars we've featured for your enjoyment across the following pages.

Our lead story concerns the W177 AMG A45, CLA45 and the S-badged versions of the same cars. Traditionally, if someone in the family owned a Mercedes, it was likely to be your grandad wafting around in a large barge. Since the reinvention of the A-Class as a hot hatch, that's all changed, with W176 AMGs enticing buyers who previously championed RS, VXR and Type R machinery. The new arrivals look set to secure even more of the growing youth market.

The Mercedes scene is arguably stronger than it's ever been, making my time as editor of this magazine a thoroughly enjoyable one. Thanks for your support. Catch you around.



**Dan Furr** Editor  
[@DanFurr](https://twitter.com/DanFurr)

**Email** [md.ed@kelsey.co.uk](mailto:md.ed@kelsey.co.uk) **Twitter** @mercdrivermag

**Facebook** [facebook.com/MercedesDriverMag](https://facebook.com/MercedesDriverMag) **Instagram** @mercdrivermag

# KRAUTROCK

Ben Walker's W176 A45 AMG doesn't just talk the talk – it brings the noise, shouting like a Teutonic mentalist...

WORDS Daniel Bevis PHOTOGRAPHY Chris Wallbank



STRICTLY  
NO ENTRY  
BEYOND  
THIS POINT  
(STAFF ONLY)





Germany might not be the first country that springs to mind when you think of rock 'n' roll, as an infamous exchange from *High Fidelity* neatly summarises: "You wouldn't be familiar with our immediate influences, they're mostly German." "Kraftwerk? Falco? Hasselhoff?"

Nevertheless, the nation has had its musical moments. Who doesn't like a bit of Can, Faust or Die Toten Hosen? The spirit of screaming rebellion is there. You've just got to look beyond the lederhosen, foaming steins, huge suspicious sausages and unnecessary racial stereotypes.

The Bundesrepublik's prolific guitar-band heritage directly feeds into countless areas of popular culture, not least the design and manufacture of automobiles. So, let's shoehorn a painfully stretched 'what if' into this article, and try to imagine the line-up of recent Mercedes-Benz models as a rock band. Which would fulfil each role?

For starters, you'd have to have the G-Wagen on bass. After all, bass players are rugged and hardcore, right?! The CLS 350 Shooting Brake would be the drummer. It's a bit naughty, but also very practical. Guitarist? That'd be the GLA 45 AMG, simultaneously deranged and precise, and unashamedly larger than life. And the frontman? You're looking at it right here across these very pages – the crowd-surfing mentalist that is the W176-generation A45 AMG.

Every credible band needs a wild, noisy lunatic at the front of the stage, and the shouty A45 fulfils this role with gusto. If you haven't driven one yet, there's

something you really need to add to your automotive bucket list: A45 full-bore flat-shifting one in a tunnel. The whipcrack explosions from the spangly tailpipes sound like you're being strafed by Spitfires. Spitfires with whips. It's hilarious.

The A45 really is beautifully antisocial. It's Johnny Rotten. It's GG Allin. It waves two fingers at the traditional concept of the hot hatch. Whereas the bloodline of the original Golf and 205 GTIs, and, of course, their numerous brethren, may have somewhat transmuted over the years from 'sensible car that's quite quick' to 'quick car that happens to be quite sensible', the A45 AMG takes the concept of the twenty-first-century hot hatch to an absurd and extreme caricature.

Power is pushing on for 380bhp in the facelift W176 A45 AMG's factory specification. It's the same output as an early Lamborghini Countach, but from a four-cylinder motor. That's a pretty rock 'n' roll hatchback. It's all about hedonistic excess.

The Petronas-liveried car you see here, lovingly curated by Mercedes enthusiast, Ben Walker, is currently working its way through an inevitable chapter of every frontman's story: the part where they've burnt themselves out in a narcotic haze after countless months on the tour bus, dropping in and out of rehab and opting to reinvent themselves as a clean-living, straight-edge upstanding citizen. Bourbon and smack make way for quinoa and artisan mineral water. Sport and healthiness have suddenly become paramount.

What better icon for a recovering AMG to aspire to than the long-standing association with the Malaysian oil conglomerate, Petronas? This is a name

**Facing page** Forge Motorsport tuning equipment and remap develops 440bhp from the W176 A45 AMG's motor

**Below** Air ride equipment nestles comfortably in custom boot build and is controlled by Air Lift 3P management



### The flip side

The W176 A-Class is a completely different beast to earlier versions of the same model, starting with the W168 in the late 1990s. Marking Mercedes' entry into the compact car market, the short, practical super-mini-cum-MPV earned an unenviable reputation for overturning, a trait encouraging the recall of all W168s sold and the suspension of further showroom sales until electronic stability control and suspension upgrades could ensure no further accidents. In addition to the DM2.5billion spend developing the W168, a further DM300million was spent on these fixes. The W169 A-Class arrived in 2004, before a complete redesign for the W176 in 2013.





that's been slathered over the Mercedes Formula One team's race cars since the 2010 season, and Lewis Hamilton certainly seems to be doing all right under those colours. It ticks a lot of boxes.

This is an interesting manoeuvre for Ben. The trajectory of his automotive adventures essentially being a short flat line followed by a long and steeply raked one. His first car was a bone-stock Volkswagen Fox, but by the time he was on his third car, he was bolting hydraulic suspension to his Mk7 Fiesta Zetec S, going on to win Ford Fair's coveted Show and Shine award and sitting proudly on the *Fast Car* stand at TRAX Silverstone. A 2015 Scirocco followed the departure of the diminutive Blue Oval, the Volkswagen running 370bhp, air-ride and swallowing up close to £15k in mods, which begs the question: why the shift from Wolfsburg to Stuttgart?

### LOOKING FOR FREEDOM

"I became bored and unhappy with the Scirocco," reasons Ben. "An overpowered front-wheel drive car is all good fun until it rains. I started to strip the Scirocco and at the same time look for its replacement, which ended up being the A45. Compared to rivals like the Audi RS3, Ford Focus RS and Volkswagen Golf R, the AMG is a much more exciting car, as well as being something that isn't extensively modified by many owners."

With a clear plan of attack, the A45 was purchased in February 2018. A completely standard facelift

W176, it was bristling with exciting additions from the factory options list, including an AMG Performance exhaust, aero kit and panoramic roof. Impressively, modifications were getting mapped out way before the keys were in Ben's hand. In fact, three months before he'd even found the car, he'd bought a set of nineteen-inch Rotiform LAS-R wheels and the suspension setup, consisting of AirREX struts and bags along with Air Lift Performance 3P management. The man knows what he wants.

"The wheels had to be machined to fit, work carried out by Fix A Wheel," says Ben. "When I came to fit the suspension, the rear initially sat much higher than the front, and I was sure that if the bags were manufactured differently, the car would go much lower. I contacted Indy at The Performance Company, and within a couple of weeks, I was sent a pair of redeveloped rear bags, free of charge, which made the car sit perfectly in each corner."

One of our favourite elements of the A45 is the aforementioned AMG Performance exhaust. It makes some pretty incredible noises, but although Ben's car came with this option already installed, it was one of the first things he unbolted. He had sound reasoning, of course. "I've always bought Milltek exhausts, The company's A45 system is next-level," he grins. "MG Auto Motorsport fitted a decat downpipe and non-resonated, valved cat-back to the car, which is now equipped with Milltek's Active Valve Control – a Bluetooth app that lets you



override the standard valve settings on the A45.” How cool is that? The car doesn’t sound so much like a strafing Spitfire as a Led Zeppelin drum solo in a colossal stadium, with your head sandwiched between two Marshall stacks. It’s insane, frankly. Proper recipe for tinnitus.

“The guys at Forge Motorsport have taken care of the performance side of the build,” Ben continues. “My A45 now benefits from a Stage 2 remap, a side-mount charge-cooler, a centre charge-cooler, a free-flowing air intake, a new blow-off valve, a strut brace, an under-chassis brace kit and the company’s new A45 oil catch can, which was developed on my car. Forge fitted everything for me and now the car is pushing out 440bhp.”

## TRUE SURVIVOR

You can’t really argue with that, can you? A hot hatch running the sort of horsepower that was once the sole preserve of supercars, along with high-end footwear and the kind of suspension delivering devastatingly aggressive looks on the showground as well as providing superior control for fast-road and track driving. This angry little Merc rocks on every conceivable strata. But the thing that really pushes it above and beyond is that unique and eye-catching teal-infused wrap.

“The design is based on the Petronas Mercedes Formula One cars, along with a hint of British GT-style livery,” he explains. “I designed it myself, using Forza Horizon and Photoshop. The graphics

**Above** Superbly applied custom wrap sets Ben’s A45 apart from all others and has ensured entry into a number of respected car shows

were cut on my plotter and fitted with help from my missus and my dad.” It’s an offbeat route to creating a custom wrap, but the flawless execution is mirrored by the quality of the design and superb application to impress even the most seasoned of wrappers.

This wrap, combined with the gleaming wheels and on-point stance, is what’s gained Ben entry into every prestigious show hall across the recent show season, but don’t go thinking you’re looking at a one-trick show-pony. This thing gets used and used hard. “I own a van and drive that for work, but I use this car for everything else. It drinks fuel, meaning it’s pretty expensive to run, but driving such an exciting Mercedes softens the blow!” he laughs. “I went to Wörthersee, Austria, in the car, where it was driven just like any AMG is built to do. Plus, on the autobahn, it managed to reach 166mph, and that was before the remap. The car also excelled on the twisty-turny roads of the Nassfeld Pass.”

This shouty little rock star is a long way from Ben’s roots in a budget Volkswagen Fox. He’s already pondering the future of the build: his first option is to ramp up the power, throw in a load of carbon trim and make the engine bay pretty, while option two is to swap the bags for a static H&R setup and fit a set of lightweight OZ Racing wheels.

This is a frantic little car with a constantly changing outlook; it’s a Jimi Hendrix solo with a Matt Freeman bassline, with Travis Barker on drums and Bon Scott yelling at anyone who comes near. Forget Falco and Hasselhoff, this thing rocks on a whole other level. 🎸

# Patrick Carroll

1990 (Aug)



## Mercedes-Benz 300 D

Saloon. Diamond Blue, Blue cloth interior, electric sun roof, front arm rest, 12 hole alloy wheels. one family owned from new, 30900 miles only  
unique in this condition with this mileage.

£10,750

## Mercedes-Benz E 230

Elegance, automatic saloon, Metallic Azurite Blue with contrasting cream beige interior, 8hole alloy wheels, once again full history in the ownership of one family.  
40840 miles only

£4,750

1997 (Jan)



## Mercedes-Benz 500 SEL

Long wheel base saloon, obsidian black with complimentary black Nappa leather upholstery. Electric glass sunroof. Electric memory heated seats front and rear, rear roller blind in fact every factory option. An exceptional luxury car with every extra plus full main dealer history.

Prestige and presence for

£6,250

2001 (Sep)



## Mercedes-Benz SL 500

Silver Arrow. Collectors edition, Ultra metallic silver paint, aluminium trimmed grill, multi piece six spoke 18" alloy wheels, 302 BHP V8 engine hand built by AMG, 5 speed automatic gear box, special two tone grey leather. Birds eye maple wood as well. Panoramic glass roof hard top, electric soft top, A beautiful car with full and comprehensive main dealer history. 31164 miles only.

£45,000

2001 (Sept)



## 2003 Mercedes-Benz G55 AMG

long wheel base . LHD, metallic silver, black Nappa leather, electric Glass sunroof, fully protected bull bars and side steps in stainless steel. A magnificent vehicle in every way, 25000 miles only, Extensive Mercedes Benz dealer history.

£40,000

2003



## 1972 Jaguar E type V12 Coupe

Bright signal red, black leather, chrome wheels, manual gear box, one family owner from new.  
11000 miles.  
looks pristine.

£80,000

1972



# Livewire

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## New car, drivers and principal for EQ team

Mercedes ready to enter 2019/20 Formula E season

After 125 years of motorsport history, Mercedes-Benz is about to write a new chapter in the upcoming season: at the opening round of the 2019/20 ABB FIA Formula E Championship in late November, two all-electric race cars will be fielded by the EQ Formula E Team for the first time.

Occupying the two EQ Silver Arrow 01 cockpits will be ex-Formula 1 driver Stoffel Vandoorne and current FIA Formula 2 championship leader Nyck de Vries. "In Stoffel and Nyck, we have recruited two formidable and adaptable drivers who can continue to learn and grow with us in our debut season in Formula E," says Ian James,

Team Principal. "At Mercedes-Benz, we can look back on 125 years in motor racing. However, we know that Formula E is very different from any other series we have ever competed in. We are doing everything we can to achieve success, but we know that we have a steep learning curve ahead of us."

In its debut season, the team will draw on the knowledge and combined motorsport expertise of the Mercedes family. At the heart of the EQ Silver Arrow 01 is the electric motor which has been designed and developed at Mercedes-AMG High Performance Powertrains (HPP) in Brixworth, which is the Daimler Group's global centre of excellence for hybrid technology. Engineers at Brixworth continue to develop the hybrid power units with which



Mercedes has achieved the amazing feat of an F1 championship double in each of the past five years.

Responsibility for managing the cars on race weekends has been assigned to HWA AG, the Affalterbach-based motorsport specialist which has already gained a wealth of experience in Formula E with its own team, HWA RACELAB. The EQ Formula E Team also receives support from the reigning F1 constructors champions, Mercedes-AMG Petronas Motorsport, at Brackley. "The collaboration between Affalterbach, Brackley, Brixworth and Stuttgart is going to be hugely important," adds Ian James, who was officially introduced as Team Principal at the recent IAA expo in Frankfurt. "Fortunately for us, the experts who develop our Formula E powertrain have already accumulated a great deal of experience with F1 hybrid power units. This knowledge



transfer is helping us immensely, but Formula E is a completely different challenge, and we shouldn't underestimate that fact."

In early March of this year, the first all-electric Mercedes racing car saw the light of day at the International Motor Show in Geneva, decked out for the occasion in a special 'teaser livery'. Later that month, the car went for its first track outing at Varano in Italy. Further test drives took place over the next few months in Italy and Mallorca. The Gen2 racing car deployed in Formula E has a design that is unique in motorsport. While all teams use a standard-issue chassis, they can still demonstrate their technical expertise in the development of the powertrain.

The teams are therefore permitted to develop certain components – inverter, motor, transmission, parts of the rear axle and the software for energy management – to their own special design.

Stoffel already knows the car from the test sessions at Varano and in Mallorca: "We made solid progress, and everything went smoothly. After the first functional tests, it's been fascinating to gradually start working on all the different areas of the final race car."

Formula E is more than just exciting motorsport: within the short time span of five years, the all-electric racing series has established itself as a pioneer for technological innovation, sustainability and electric mobility.



### New GLB 35 4MATIC revealed

With its striking design, great practicality and space for up to seven occupants, the new GLB 35 4MATIC is set to take the compact SUV segment by storm. The turbocharged two-litre four-cylinder engine develops a shade over 300bhp and guarantees impressive driving enjoyment thanks to an eight-speed AMG transmission and variable all-wheel drive, delivering a zero to 62mph dash in 5.2 seconds. The GLB 35 4MATIC displays its full sprint potential with the RACE START function included as standard. Higher engine rpm when starting off, in combination with optimised shift points, produces the best possible traction and maximum acceleration. RACE START remains active while the accelerator is kept fully depressed. A new "Slippery" drive program is optimised for low-grip road conditions, with reduced power and a flat torque curve. Smooth gear changes and earlier upshifts support stability-focused driving.



### AMG launches winter driving programme

The AMG Driving Academy is now offering its 2020 winter sporting programme in the far north of Sweden. These driver training events have been revised and extended for the new season, and will ensure even more variety and enjoyment when driving on snow and ice. The exclusive training venue, a 337,000m<sup>2</sup> frozen lake near Arjeplog, provides the ideal opportunity to further refine personal driving skills. On an area covering around 47 football pitches, guests of the AMG Driving Academy can enjoy numerous driving and handling circuits that are not only named after world-famous circuits, but also replicate their layouts. The cars available to drive will be AMG A45 S, AMG C63 S Coupe, AMG GT S. For more information and to book your place on the course, contact AMG Experiences GmbH at [info@amg-experiences.com](mailto:info@amg-experiences.com).

# Design study mixes heritage and future

Exciting Vision Mercedes Simplex concept is star exhibit at Design Essentials III conference in Nice

In spring 1901, the history of mobility changed radically. At Race Week in Nice, a vehicle the likes of which the world had never seen appeared on the starting line: a high-performance car which Daimler-Motoren-Gesellschaft had developed at the suggestion of the visionary entrepreneur, Emil Jellinek. The resulting Mercedes 35HP, named after Jellinek's daughter, Mercedes, appeared with a completely new vehicle architecture and dominated the competitions in Race Week, which took place on the famous racetrack from Nice to La Turbie, right at the heart of what is now the Mercedes-Benz International Design Center Europe near Nice. The design is acknowledged as the first modern car and heralded in a new era of automotive design and development.

Nearly 120 years ago, this move away from a high motorised carriage to flat vehicle design with a light high-performance engine installed low down in the frame (joined by a honeycomb radiator organically integrated into the front) was the pioneer of success and the blueprint for all the cars that were to follow, whatever the brand. The layout of the Mercedes 35HP remains to this day the technical basis of all cars.

The Vision Mercedes Simplex concept recalls the 35HP's ground-breaking design and carries the pioneering spirit and styling characteristics of those days far into the 21<sup>st</sup> century. The concept's message? Simply that passion for luxury and innovation is part of the Mercedes-Benz brand's DNA, giving the manufacturer the strength to set new standards in mobility time and time again.

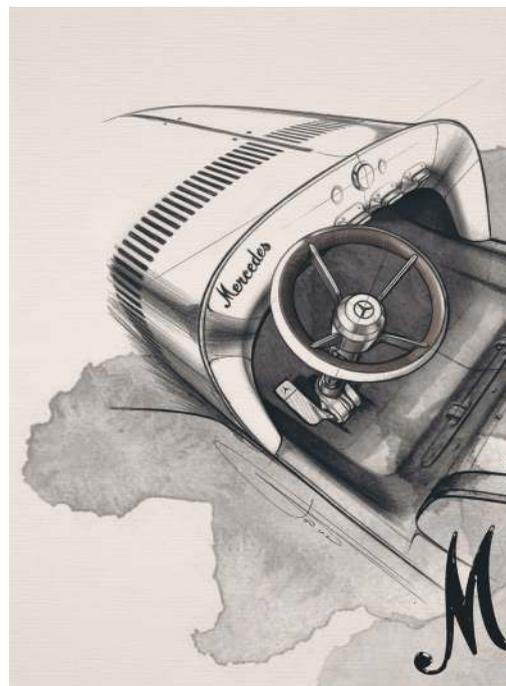
"Only a brand as strong as Mercedes is capable of the physical symbiosis of history and future. The Vision Mercedes Simplex design study symbolises the advanced engineering and focus on luxury we've become known for during more than a century of innovation in the field of automotive innovation", says the project's Chief Design Officer, Gorden Wagener.

The Vision Mercedes Simplex reinterprets the Mercedes 35HP as a two-seater with freestanding wheels, an alternative drive, an exciting User Interface and a thrilling design. Its vehicle body — with a dominant horizontal alignment — sits as a monocoque amid the four large wheels, which form the outer points of the vehicle. The resolutely vertical colour separation into a white front section and a black rear section follows the historic example set by the Mercedes 35HP. The transparent trims on the wheels reflect lightness and efficiency, as do the aerodynamic surface areas between the front wheels and the vehicle body. The entire sculpture lives from the interplay between clearly and powerfully drawn surfaces and precise technical details.

The radiator blends a dominant frame in rosé gold — reminiscent of the bronze radiator grille dominating the nose end of the Mercedes 35HP — with an opening in the form of a large lens-shaped 3D Black Panel display. This is where the famous "Mercedes" lettering is digitally superimposed, as are animations which are intended to provide information relating to the vehicle's operational status.

The decentralised wheel location components unite aesthetics and engineering artistry in a unique way. The omission of a windscreen — again, a nod to the Mercedes 35HP — reinforces an uncompromisingly sporty character and allows a seamless transition from the front-end flap to the instrument panel. The slim reversing lamps, which are horizontally integrated into the rear section, separate the upper body from the lower half of the exterior shell, which envelops the occupants in the fashion of a protective cocoon.

Quality workmanship is evident throughout, as confirmed by all those who saw the concept at Design Essentials in Nice. Whether or not any of these experimental design elements make it into production during the coming century remains to be seen.





### Race wins and titles in GT Challenge finale

Based on the tiny gaps in the points' standings, excitement was guaranteed during the season finale in Hungary. With a lights-to-flag victory on a rain-soaked track, Vincent Abril and Raffaele Marciello (AKKA ASP Team #88) came out on top in the first race. However, Maro Engel and Luca Stolz (both GER, BLACK FALCON #4) not only completed the 1-2 for Mercedes-AMG Motorsport by finishing second, but also reduced the gap to the championship leaders to only two points. It was Engel who secured second place and the valuable points that come with it thanks to a spirited and perfectly prepared overtaking move on the final lap of the race. Meanwhile, the Silver Cup title candidates, Nico Bastian and Thomas Neubauer, were able to extend their tiny lead to 9.5 points by virtue of their class win in race one. In the process, they also secured the Silver Cup teams' title for their AKKA ASP team with one race to spare, the French squad already having arrived at the Hungaroring with a considerable margin.

In dry conditions, the final race of the season got off to a hectic start with many position fights. Even so, starting driver Maro Engel immediately was able to move up one place into third with his #4 Mercedes-AMG GT3. Until the halfway point, the BLACK FALCON team looked set for championship success. However, their rivals were able to move up into fourth place during the race, mainly thanks to an extremely quick pit stop, meaning that the two teams would end up tied on points. Luca Stolz tried in vain to reach the necessary second place until the end of the race. Eventually, the team had to admit defeat with an equal number of points, but with fewer victories this season.



## See you there...

### OHSo RETRO

Now in its sixth year, the OhSo Retro Show will take place in Margate on Sunday 29th September. Fifty club stands, twenty show and shine awards, trade stands, live music and more than 1,500 classic, vintage and retro rides will be on display. Take a look at [ohsoretro.co.uk](http://ohsoretro.co.uk) for tickets and directions.

### TRAX SILVERSTONE

Once again, the UK's largest tuning show lands at Silverstone ("the home of British motorsport") for a day of fast fun on four wheels. Celebrating everything the tuning scene has to offer and welcoming owners of all makes and models, the show takes place Sunday 6th October and includes static club displays, professional motorsport demos and track time on one of the world's most famous circuits. For further info, visit [traxshows.co.uk](http://traxshows.co.uk)

### MALVERN FESTIVAL OF TRANSPORT

Including the Malvern Mini Show and Spares Day, the Malvern Classic Commercial Show, EVs and now also including the Malvern Motorcycle Show, the Malvern Festival of Transport goes from strength to strength. Expect to see in excess of eighty trade stalls, 600+ classic vehicles and 40+ classic commercials, as well as a range of electric vehicles organised by the Malvern-based Electric Automobile Association. The event takes place Sunday 13th October. Visit [classicshow.org](http://classicshow.org) today.



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## PRODUCT SPOTLIGHT

**COBRA SPORT  
TAILPIPE  
UPGRADES FOR  
W204 C-CLASS**

Performance exhaust systems from Sheffield-based independent manufacturer, Cobra Sport, have long been regarded as capable of improving the sound, look and quality of each host vehicle, delivering an enhanced driving experience to owners lucky enough to be in charge of cars packing Cobra kit. The company's offerings for the W204 C-Class are prime examples of how performance pipework can radically improve the characteristics of a car, with C200, C220 and C250 diesels and C180 petrol-powered models benefitting from dual and quad-exit offerings from Cobra's cosmetic range.

Constructed from 2.5-inch (63.5mm) stainless steel pipework and fit from the factory centre section back, each product replaces the W204's standard rear exhaust. Cobra's dual-exit option features a duo of 4.72-inch (120mm) tailpipes, while the quad-exit system features a quartet of



4.5-inch (114.3mm) tailpipes. Both systems produce the same sound and all relevant fittings and gaskets are supplied.

No matter your preference, Cobra's dual and quad-exit systems are designed to work in partnership with the OEM Sport rear bumper (either pre-facelift or post-facelift W204). The required AMG back panel is available direct from your nearest Mercedes-Benz main dealer or third-party specialist suppliers.

"We're very excited about the release of our exhaust upgrades for the brilliant W204," Cobra Sport's Sales Manager, Matt Thomas, told us. "The unique ability to easily improve the looks and sound of the sensational C-Class with Cobra Sport products has generated considerable interest from our worldwide tuning partners. As with all Cobra Sport exhausts, the new systems have been designed to improve sound with an increase in volume whilst still having a perfectly balanced pitch and tone". Through innovative exhaust design, interior cabin sound levels have been carefully managed to ensure pleasant driving at all times, even when the engine is at full load. Visit the Cobra Sport website for further information and to view the company's full portfolio of products.

**Price Dual exit £504,  
quad exit £553.35**  
**cobrasport.com or call 0114 244 7123**



## OLD ENGINE OIL BLACK ALE

Legend has it, Harviestoun Brewery's Old Engine Oil black ale was dedicated to the Scottish drinks maker's head brewer and his love of cars, but this delicious ale's thick, dark, chocolatey viscosity reveals the true inspiration behind the name! Available to buy in 330ml cans or bottles, this rich, award-winning, bittersweet brew is rated at 6% alcohol and is ready and waiting to tickle your taste buds. Just don't get it confused with actual old engine oil, which, so we're led to believe, doesn't taste as nice.

**Price £2** [harviestoun.com](http://harviestoun.com)



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Fed up with your car's old head unit not allowing you to stream music from your smartphone or accept in-travel chat? The in-car entertainment specialists at Pioneer have the solution in the form of the catchily named SDA-11DAB, a Bluetooth connected streaming and handsfree device enabling you to equip an old head unit with modern functionality. Connected wirelessly (or with the supplied cable if your car's head unit is *really* old), this palm-sized box of tricks enables DAB+ to be enjoyed with crystal clear sound and straightforward phone connectivity, making the streaming of your favourite radio stations perfectly possible and enabling you to safely accept incoming calls.

**Price £109**

[pioneer-car.eu](http://pioneer-car.eu)



## BORGWARNER NEW EFR SERIES RANGE OF TURBOCHARGERS

The UK's exclusive distributor of BorgWarner performance turbochargers, TurboZentrum, has announced details of three new additions to the EFR portfolio. Recognisable by their black compressor wheels, the new snail-shaped bhp boosters can be bought in EFR 8474, 9247 and 9280 flavours, each unit given a larger compressor side when compared to previous EFR models (8374, 9173 and 9180). While the diameter of the inlets has been increased, the outlet diameter remains the same, resulting in performance sure to impress modifiers. In fact, these new turbos deliver significantly higher air throughput than their predecessors, meaning at 2bar boost, the 8474 is capable of producing 900bhp compared to the 8374's 750bhp output in the same driving conditions. And, because installation dimensions remain the same as the older EFRs, the new models can be installed as a straight swap.

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[turbozentrum.co.uk](http://turbozentrum.co.uk)

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## RACEGLAZE RG-9H CERAMIC BODYWORK COATING

The latest addition to the extensive range of car care and finishing solutions from British company, Race Glaze, is the firm's new RG-9H Ceramic bodywork coating system, which produces a hard glass-like finish, protecting vehicles against scratching and similar damage. Designed to be applied at home, the product uses advanced silicon dioxide coating technology, adhering to paintwork at molecular level, creating an ultra-hard, 9H-rated, three-micron barrier repelling water and providing excellent resistance to dust, road film and acids found in bug splatter and bird droppings. The typical life of the coating is five years - ten times that of the best carnauba wax! Offered at a shade under eighty quid, the product is shipped with 50ml of RG-9H Ceramic coating (easily enough to cover a large Mercedes), 250ml of pre-cleaner, a selection of applicators, cloths and detailed directions for correct and lasting product application.

**Price £79.99**

[raceglaze.co.uk](http://raceglaze.co.uk)  
or call 01780 654065





### ITG 'BLACK RING' FILTERS

Air filter manufacturer, ITG, has released a range of air filters and baseplate fixings in OEM-friendly colours for those who wish to upgrade the performance and engine bays of their cars whilst retaining close to a factory finish. ITG has been at the forefront of filtration and induction technology for decades, supplying teams in series as diverse as F1, BTCC and WRC.

Price **Varies** [itgairfilters.com](http://itgairfilters.com)



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[bolawheels.co.uk](http://bolawheels.co.uk)



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Developed from the ground up as a focused trackday and race pad, EBC's RP-1 sets a new high in the company's 35-year history manufacturing world-class brake pads. By adopting a no-compromise approach coupled with cutting-edge organic friction chemistry, RP-1 is the pinnacle of three years research and development, thousands of hours of testing and hundreds of circuit laps. Superb modulation gives the driver unprecedented control and feel through braking, each pad thermally bedded to make for a true 'plug and play' product. Promoting a low rate of wear (rivalling the best endurance racing pads available), RP-1 features EBC's famous stainless back plates, parts recognised for helping to reduce heat conduction through the pad, thereby lowering hydraulic temperatures. Plus, unlike most semi-metallic race pads, RP-1 relies on advanced organic friction technology and contains a low steel-fibre content, making the product kind on discs without sacrificing pad wear. EBC's extensive RP-1 applications list covers many Mercedes vehicles, from the W204 and W205 C63 AMG through to the mighty C190/R190 AMG GT.

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The fuel supply specialists at Webcon have developed a superior quality performance kit to allow fitment of twin Weber DCOE 40 carburettors in place of the four-cylinder W121 190 SL's OEM Solex units. Superbly crafted in the UK, the kit (part number PME201) includes genuine Spanish DCOE 40 carburettors expertly calibrated to suit the sexy SL, ensuring no further adjustment is required. The kit also includes CNC-machined air box adaptors, replacement rubber mounting blocks, linkage rods, gaskets and the required studs. Put simply, this is the finest 190 SL DCOE kit on the market today. An option of new manifolds to allow the correct single-carburettor barrel to each cylinder arrangement is also available.

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### BILSTEIN B14 (PSS) SUSPENSION KIT FOR C117 CLA 45 AMG

Highly regarded by fast-road racers and track day enthusiasts, Bilstein's line of B14 suspension packages improve handling whilst offering an adjustable ride height in an OE quality, direct-fit kit. Monotube performance dampers are matched with springs tuned for each application, with a zinc-coated, threaded body design giving owners the flexibility to set the perfect ride height. This CLA 45 B14 kit (part number 47-231108) delivers a drop of almost 50mm and comes complete with front coilovers, rear dampers and springs, all necessary mounts, bushings and adjustment tools. Best of all, Demon Tweaks is currently offering the kit with a massive twenty-five percent discount over the regular retail price. Go!

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**ML 250 SE Bluetec**, 2015/65, 2 owners, 7-speed auto, 40,000 miles, fmbsh, cavansite blue metallic, anthracite leather, climate, cruise, ESP, spare set of winter tyres too! Perfect example.  
..... **£19,950**



**300 TD**, 1991H, 4-speed auto, 171,000 miles, fmbsh, nautic blue metallic, navy cloth, illuminated vanity mirrors, 7 seats, electric sunroof. Well maintained car.  
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**300 SL**, 1987E, 4-speed auto, 77,000 miles, fmbsh, signal red, creme beige cloth, black soft top, factory fitted hard top, rear seats. Absolutely gorgeous.  
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**SL 500**, 1996N, 5-speed auto, 75,000 miles, fmbsh, Azurite blue metallic, mushroom leather, electric navy soft top, factory fitted hard top, climate, cruise, electric steering column, electric heated memory seats, ASR, rear seats etc. A well sorted example.  
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**E220 Cabriolet Sportline**, 1996P, 4-speed auto, 48,000 miles, fmbsh, tourmaline green metallic, mushroom leather, electric dark brown soft top, sports chassis, heated seats, otg. Perfect example  
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**E220 Cabriolet Sportline**, 1997R, 4-speed auto, 45,000 miles, fmbsh, brilliant silver, anthracite leather, electric black soft top, factory aircon, sports chassis, heated seats, electric driver's seat. Rare late car..... **£18,950**



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# SECOND COMING

The arrival of the two newest AMGs sets fresh benchmarks for compact performance and proves there's nothing 'junior' about the 45 series...

WORDS **Dave Humphreys** PHOTOGRAPHY **Mercedes-Benz**

It's just after lunchtime in the searing Spanish sunshine. The car gently comes to a halt. I toggle the steering wheel-mounted dial in order to select Race mode. The brake pedal is fully depressed by my left foot. Right is on the throttle. Revs build and flutter around 3,500rpm for the briefest of moments before I release the anchors. What happens next is how I imagine a fighter pilot to feel when being flung off an aircraft carrier by a steam-powered catapult. It's safe to say the Mercedes-AMG A45 isn't like any other hot hatch that has gone before. Indeed, we may need to devise a more appropriate name. 'Hot hatch' feels like a considerable understatement.

When the bods at AMG got their hands on the W176 A-Class to create the original A45 back in 2013, not only did the brand create its first performance compact model, it also managed to open up the Mercedes marque to a whole new demographic of buyers. The CLA, CLA Shooting Brake and GLA variants of the A45 would follow, a successful lineage the second-generation A45 and CLA45 tested here is destined to continue.

The first A45 was propelled by the M133 engine, a unit pumping out a beefy 375bhp and sending power to all four corners. The same configuration applies to this newer generation of 45 models, albeit with significant performance changes to the base cars (AMG seeing fit to add the requisite reinforcements needed for extra appeal to Mercedes' rapidly growing youth market). In both the A and CLA, buyers get to choose from the standard 45 models producing 381bhp, or the more focused (or deranged?! ) 45 S. This tantalisingly badged Benz sees maximum

power rise to a staggering 415bhp thanks to ECU calibration. All this from an unstressed M139 1,911cc turbocharged four-cylinder powerplant, the successor to the M133 and an engine fully warranted by the factory not to go pop under sustained periods of 'spirited' driving.

## SWITCH SIDES

To ensure mechanical failure doesn't register on your radar, an all-aluminium crankcase (constructed using a chill-cast method) provides increased strength. Its closed-deck construction draws from AMG's motorsport experience and helps minimise overall engine weight. Expensive forged alloy pistons move more freely thanks to Nanoslide cylinder linings, a technology that first appeared in AMG's M156 engine. Initial planning for the M139 unit began around the time of the W176's facelift, when engineers first developed new architecture for the current W177 A-Class. Simply put, the old engine wasn't going to fit in the sleeker design of the new model, a challenge necessitating a rethink. The decision was made to turn the new engine around 180 degrees. Doing so brought several benefits: from a packaging perspective, it was easier to accommodate the turbocharger (positioned high on the engine) and mass was moved to a more centralised position.

Having the turbocharger and exhaust manifold sandwiched between engine and bulkhead sees cooling shift to the front of the engine bay. Not only does this help in improving the car's aerodynamics by ensuring fewer deflections, the shorter distance between cooling equipment and incoming airflow

**Facing page** This latest range of AMG compacts looks set to be even more popular than the last, amounting to a full-scale attack on the hot hatch scene previously dominated by RS, VXR and Type R machinery

**Below** Digital display is nowhere near as integrated into the dash as we'd like, especially when rival manufacturers are making their modern driver interfaces far more slick than this





### Forward plan

"We've completely redesigned the 45 models to demonstrate our high competence in modern sports car development," says Tobias Moers, Chairman of the Management Board of Mercedes-AMG. "From the engine and transmission through the chassis, the elaborately constructed drivetrain to the body structure and, of course, the design itself, our aim is to raise vehicle dynamics and the sporty driving experience to a level previously unimaginable in the compact class. With the presentation of these, our most powerful and most dynamic compact sports cars to date, we're also reinforcing the significance of this segment for Mercedes growth strategy."

helps to improve engine responsiveness. Cool air is also fed through the engine housing directly to the manifold in order to further aid thermal management. It's a trick engineers learned during their time working on Mercedes motorsport applications.

Meanwhile, an electrically operated water pump cools the crankcase, although it doesn't activate on cold start, thereby helping the engine to reach operating temperature quickly, behaviour which helps satisfy emissions regulations. A complete redesign of the combustion chamber was a contributing factor to gaining power. Larger valves help to reduce the work each piston has to do in order to expel exhaust gases, a change requiring the corresponding injector and spark plug (smaller than before) to be turned ninety degrees. Compression ratio rises to 9.0:1.

AMG'S fettling goes far beyond merely dropping in that killer engine and ramping up spring rates. To make it possible for drivers to exploit the increase in performance, numerous other changes have been carried out beneath the skin; as is the case with the A35, a two-millimetre aluminium shearing plate encloses the base of the engine bay to bring additional torsional stiffness to the front end. Other additions include steel bracing plates between the upper longitudinal beam and the A-pillars, referred to as 'shotguns' due to their shape. Crucially, these parts contribute to a five percent improvement in torsional rigidity. Support bracing around the rear axle and

subframe reduces kinematic displacement by up to fifteen percent, too. And unlike regular Mercedes-Benz fare, in each AMG, the rear subframe is rigidly mounted to the body with a setup featuring three transverse control arms and a single trailing arm.

Even in its most relaxed Comfort setting, the A45 S is deceptively quick. Much of this is down to just how much refinement AMG has been able to retain and how well the adaptive suspension soaks up the asphalt below. Even on nineteen-inch wheels, the ride won't have you wincing at every lump and bump you see approaching. Of course, that's working on the assumption you can see them, which may not be the case considering the rate at which these new AMGs can shorten any straight before the next corner comes into view!

**TAKE YOUR PICK**

The on-road behaviour of the CLA 45 S is almost indistinguishable from the feisty hatch and, despite the additional ninety litres of boot space, just fifty kilograms separates the cars. Perhaps unsurprisingly, they share identical 2,729mm wheelbases, although the CLA 45 S is 248mm longer overall and benefits from wider front and rear track.

Buyers can specify an aero pack cost-option for the A45. This nifty add-on provides more bodywork appendages to generate even more downforce at high speed. The rear wing is far from subtle, and the double set of dive planes on each front corner may seem tacky to some Mercedes Driver readers, but AMG engineers confirm the parts being tangible benefits, especially at the track. On the CLA 45, a taller rear lip spoiler stretches across the boot lid and

owes more than a passing nod to the part present on the back end of the AMG GLC 63 Coupe.

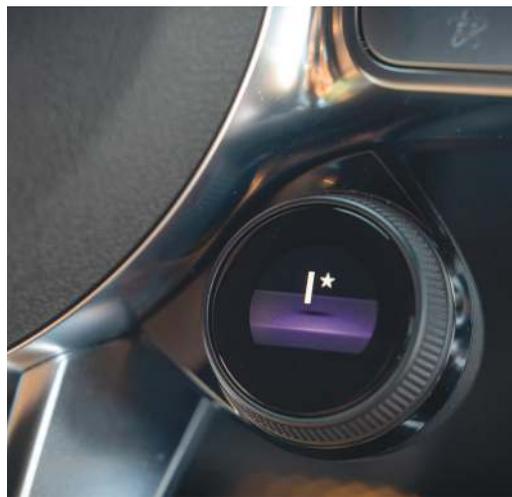
Only a handful of years ago, the 3.9 seconds it took the A45 to crack 62mph from rest was the stuff of supercardom. Now, this hoon-tastic hatchback can outdrag an AMG GT Roadster to the benchmark speed by a tenth of a second. The new arrival, however, isn't a one-trick pony when it comes to getting from A to B. The way this car holds its line through corners when pumping out what seems like impossible speeds is sure to fast-track it to becoming a bona fide future classic. Indeed, such are the astonishing levels of grip, cornering speed seems limited only by the law and your own bravery.

Few cars outside the realm of supercars deliver driving dynamics that appear to toy with the laws of physics the way the A45 S does. That's one of the reasons why the engine features baffle plates in the sump, parts designed to mitigate the risk of oil starvation to the engine during increased lateral acceleration. Even though the A45 S's peak power is reached at a lofty 6,750rpm, the rate at which the car pulls throughout the rev range is nothing short of outstanding. A mountain of torque is delivered with an urgency that'd tire you from swapping gears were it not for the slick eight-speed automatic transmission. You're flung out of every corner at a rate that seems almost as though you could pop a wheelie! And I should know - I spend as much time riding on two wheels as I do being carried on four.

Through corners is where the new A45 and its variants truly excel and, it has to be said, where they'll leave most in their wake. These cars grip and grip... and grip. You can enter a tight, sixty-degree bend

**Facing page** Above all else, AMG badging signals serious performance credentials, which these new 45s have in spades

**Below** The new 45s do a good job of balancing performance and practicality, though the CLA offers much more luggage space than the hatchback





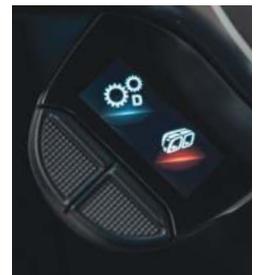
### Cool custard

Yellow accents are present throughout the interiors of the new 45s, a design touch emphasising motorsport DNA. Also included as standard equipment is the AMG Performance flat-bottomed steering wheel trimmed in Nappa leather and DINAMICA microfibre with contrasting yellow stitching, a yellow top marker and AMG function button. In all models, the centre console is finished in high-gloss black with a touchpad as standard. Additional switches control three-stage ESP, the manual transmission mode and the optional adaptive damping system. If ordering the optional Leather Package, you'll get a chrome centre console surround, too.

carrying way more speed than you think suitable and experience the kind of handling you'd previously only thought possible from a slot car! There isn't a hint of front-end pushing or understeer. In the simplest terms, it's a bit like going ten-pin bowling and seeing lane shutters rise to avoid clumsy gutter shots. This effect is largely down to a combination of specially developed Michelin Pilot Sport 4 S tyres, the complex suspension and that incredible transmission. A large amount of the A45 and CLA45's superior handling can, however, also be apportioned to the unique rear axle and how it distributes power.

The entirely new 4MATIC+ system features AMG Torque Control, which plays a vital role in making these new 45s so competent. On each vehicle, power continually shifts between the front and rear. The front axle uses an open differential setup with torque vectoring by brake, but things get more complex at the back. There, two electro-mechanical multi-disc clutches are put to work, each managed by its own ECU. Both control units draw from a vast array of driving data to determine precisely how to split power. Truly impressive behaviour occurring in entirely variable fashion.

Previous 4MATIC+ systems were hydraulic. They featured a pump in the middle and needed a difference in wheel speeds to begin operating. Now, with so much information (wheel speed, throttle position, steering angle, yaw etc.) being collected, the transmission's electronic brain can almost predict **2**



what's going to happen and react in instant, intuitive fashion to driver input and road conditions.

For those feeling supremely confident, the S variants feature an exciting Drift mode. Activated through a quick sequence of pulling both gear shift paddles and confirming to the car that you're a lunatic – okay, that might not be the word used by the digital dash display – you can encourage massive rear bias and engage full attack mode, easily performing donuts and achieving spectacular angles of rear slip, the car you're driving carefully monitoring what's going on and being ready to step in only when you run out of talent. Ahem.

### BEND TO YOUR WILL

From how the steering wheel fits in your hands (with flattened edges at nine and three), to the subtle weight loadings applied in the different drive modes, you'll simply relish driving either of the new AMGs, whatever specification you opt for. Considering how many thousands of lines of code are at constant work, you'll be pleased to know there are still glimpses of natural, raw, mechanical grip and feel. Adding to this, both S versions are equipped with 360mm cross-drilled disc brakes at the front. These are gripped by six-piston calipers radially mounted on newly designed front knuckles. This type of setup reduces flex under heavy braking and, on track, proved itself to be more than capable of comfortably and consistently hauling the car down from fast pace. An initial application of the brakes can scrub off even faster than the car can put it on, but it's the ease at which you can modulate the pedal as you enter a corner that adds to the sense of control.

After leaving the track and hitting mundane urban stop-start traffic, we experienced braking that never felt grabby, nor did the pads exhibit any glazing or produce an annoying squeal. Being able to close the exhaust valves at the touch of a button compounds the civility that's still on offer here. It's exactly this

**Above** Tech heavy and with aggressive looks and superior driving dynamics, the A45 S is sure to be a huge hit

breadth of ability – the way you can seamlessly switch between two extremes – that makes the two new AMG 45s so appealing. All the mod cons are here, from heated sports seats to the latest MBUX infotainment system, offering as much connectivity as you're likely to need in today's digital world. Build quality inside the cabin is a massive step up from the old A45, too, ensuring you can happily trundle around in traffic affording your passengers as much comfort as they might expect from a regular A180. Skip the optional aero package, pick a muted colour and you'll have an AMG that'll go unnoticed to the majority of other road users. That is, of course, until you re-engage launch control...

### FAST FACTS

|                               |                                                                                                                                                                 |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Engine</b>                 | 1991cc M139 inline-four with roller bearing twin-scroll turbocharger                                                                                            |
| <b>Max. output</b>            | A45, CLA45: 387hp, 480Nm<br>A45 S, CLA45 S: 421hp, 500Nm                                                                                                        |
| <b>Drive system</b>           | 4MATIC+ variable all-wheel drive with AMG Torque Control                                                                                                        |
| <b>Transmission</b>           | AMG Speedshift DCT eight-speed dual-clutch gearbox                                                                                                              |
| <b>0-62mph (0-100km/h)</b>    | A45, CLA45 S: 4.0s<br>A45 S: 3.9s<br>CLA45: 4.1s                                                                                                                |
| <b>Top speed</b>              | A45, CLA45: Electronically limited 155mph (250km/h)*<br>A45 S, CLA45 S: Electronically limited 168mph (270km/h)<br>* 168mph (270km/h) with AMG Driver's Package |
| <b>Combined CO2 emissions</b> | A45, A45 S: 192-189g/km<br>CLA45: 188-185g/km<br>CLA45 S: 189-186g/km                                                                                           |
| <b>Efficiency rating</b>      | E                                                                                                                                                               |





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### 300SL Roadster 1986C

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### E320 Sportline Cabrio 1994L

Blue/Black metallic, grey leather, black soft top, 4 speed auto, cruise, airbag, electric seats, electrically adjustable steering column, leather steering wheel, original Sportline 15" alloys, FSH, 96,000m . . . . . **£15,950**



### 320CE Cabriolet 1993L

Pearl Blue metallic with dark blue lower panels, blue soft top, grey leather, walnut wood, leather steering wheel and gearknob, 4 speed auto, airbags, original alloy wheels, FSH, 51,000m . . . . . **£19,450**

### CL420 Coupe 1998R

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### 220SEb Coupe 1965C

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### SL320 Roadster 1996P

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**TORQUE** *Enthusiast*

## Jonathan Rotheray

Supercharging a V8 is all well and good, but if you want to achieve big bhp without the need to visit the pumps every ten minutes, buy yourself an AMG hot hatch...

**M**ercedes cars and tuning projects haven't always been the most obvious of bedfellows. In years gone by, to get big power out of a car wearing the three-pointed star, a supercharger was the equipment of choice, usually strapped to a throbbing great V8. The problems in ensuring widespread appeal for this approach, however, are many. For a start, you needed to have enough cash in the bank to maintain and insure a V8, as well as be in a position to stump up the purchase price of what's likely to be a fairly expensive car in the first place. Plus, of course, your money needs to be disposable enough for you to be happy to dump it in the till of every fuel filling station passed. Clearly, this removes any notion of all but the most well-heeled youngsters from joining the Mercedes party, maintaining the brand's status as the discerning choice for mature drivers.

Next, as any tuner worth his or her salt will tell you, in terms of regular road cars, there are limits to how much power a big-displacement engine coupled with a supercharger can produce without encouraging massive expense through hugely upgraded internals. Without mentioning other areas of concern when working with a supercharger and V8 in the hope of developing big bhp on a sensible budget, it's clear to see Mercedes' decision to switch to punchy turbochargers strapped to compact, two-litre inline-fours was just about the best move the brand could make in its efforts to appeal to the youth market.

Suddenly, Mercedes fans could buy an A45 AMG, treat it to an enlarged downpipe, add an aftermarket air filter, appoint a tuner to program new software onto the car's ECU and the resulting power output would match or exceed what the supercharged V8s of yore are producing (but without attracting the horrendous running costs). Best of all, the updates required to hit big power in an A45 AMG can be secured at low cost. Bearing in mind Mercedes-AMG engineering and build quality is unrivalled, owners can rest assured their car's unstressed engine will be perfectly happy to accept a hike in horsepower without generating complaint.



Even a Stage 1 map will see a boost to 410bhp for less than five-hundred quid (speak to the chaps at GCAP Performance [gcaperformance.co.uk](http://gcaperformance.co.uk)), with incremental increases in power possible through low-cost hardware upgrades and the necessary software tweaks. Don't get me wrong, the low-down grunt and effortless performance of a V8 is to be celebrated and something Mercedes-AMG arguably delivers better than any other marque, but if you're looking for the kind of hot hatch hoonery traditionally associated with cars built by Ford, Vauxhall, Honda, Volkswagen, SEAT, Renault and Audi, then there really is no better bang for your buck than a 45-series Mercedes.

The W176-generation A-Class is, in relative terms, a fairly new car, and thanks to excellent build quality, we are many years away from seeing A45 AMGs appearing in breaker's yards. That said, I'd like to see a blend of old and new Mercedes at some point in the near future, where the guts of an A45 AMG are transplanted into a much older Benz, thereby giving modern levels of performance, reliability and engine technology to a classic design. Perhaps a *Mercedes Driver* fan reading this column will be the first to bring the idea to fruition? Well, what are you waiting for?! 🚗

**Above** The W176 A45 AMG was a significant development for securing the future of the Mercedes brand through improved perception among car buyers who wouldn't previously have considered buying a Benz

*We are many years away from seeing A45 AMGs appearing in breaker's yards*

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1997 BMW Z3 2.8i automatic, Titan Silver, A/C, 33500 miles, FSH..... £8,495



2000 Mercedes SLK320, Brilliant Silver, Black hide, 63000 miles, FSH..... £5,795



2007 Ford Mustang Shelby GT500, Torch Red, 9,500 miles, as new..... £45,000



1999 Mercedes E55 AMG, Brilliant Silver, every extra, 65000 miles, FSH..... £8,795



2001 (Y) BMW 330i SE Saloon, Titan Silver, Grey hide, 1 owner, 29300 miles, FSH... £5,995



2001 Mercedes SLK320, Designo Metallic Purple, 20000 miles, FSH..... £9,795



2003 Mercedes ML55 AMG, White wrap, Black hide, 78000 miles, FSH..... £7,995



2004 BMW E46 318Ci SE Convertible, Auto, Silver Grey, 51500 miles..... £5,795



2000(W) Mercedes E240 Elegance, Brilliant Silver, 41000 miles, like new..... £2,995



2001 (X) BMW Z3 2.2i Roadster, Titan Silver, Black hide, 61000 miles, FSH..... £5,295



2000 Mercedes SLK320, Lianite Blue, Black Hide, 42000 miles, FSH..... £6,295



2002 BMW E46 330Ci Convertible, Titan Silver, 79000 miles, FSH..... £5,795



1999 BMW Z3 1.9 Roadster, Boston Green, Green/Beige hide, 34000 miles..... £5,495



2018 Skoda Karoq 1.5 TSI SE L, Candy White, 1 owner, 5200 miles..... £20,495



1991 Volvo 240 GL, 5-Speed, Metallic Silver, 73000 miles, FSH..... £5,995



2001 (Y) VW Bora 2.8 V6 4Motion 6-speed, Bright Green, 44500 miles, FSH..... £5,795



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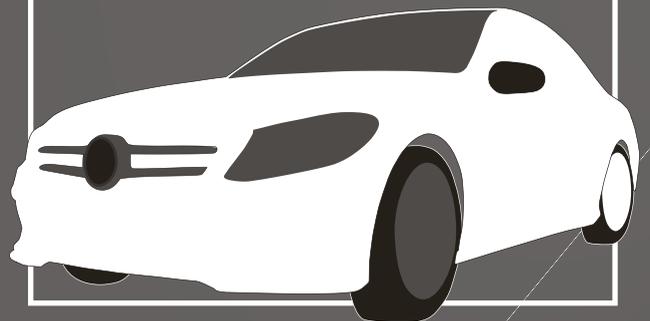
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**TORQUE** *Enthusiast*

## Felix Camfield-Walker

Meeting on the last Monday of every month, Hitchin's H-Town Classic & Dub Club welcomes all retro rides and has grown rapidly since its first meet back in 2017..

September marks the second anniversary of H-Town Classic & Dub Club, the award-winning multi-marque owners club I established after my five-year break from the enthusiast scene (time out following the birth of my daughter, Flora). I've owned many different classic cars over the years and I've enjoyed being a member of the various clubs dedicated to each make and model, but more than being a fan of a specific marque, I'm a petrolhead who loves classic cars in general. Own an old Triumph? A Ford Cortina? An air-cooled Porsche? I love them all, but finding a club that celebrates all retro rides and hosts regular meets proved difficult.

I'm the proprietor of Farley's Hair Salon in the Hertfordshire town of Hitchin. It was while airing my dissatisfaction in the presence of a customer that the suggestion of establishing my own club was put forward. Subsequently, after setting up social media channels and inviting everyone in the area to attend the first of what I hoped would become a monthly meet, a total of thirty-four classic cars arrived in the generously sized car park of the local pub that'd agreed to host the get-together. Early Volkswagens, similarly aged Porsches, a 2CV, a beach buggy, MGs and even a Lambretta showed up.

A short while later, I contacted Hitchin Initiative, a highly effective partnership founded to ensure the town thrives through the efforts of businesses, community organisations, residents and the local authority. At the suggestion of another Farley's customer, I requested the use of Hitchin market square to accommodate H-Town Classic & Dub Club for the evening of the last Monday of every month, starting with our second meet. Pleasingly, the idea was welcomed, and every one of our gatherings has taken place in the heart of Hitchin since.

Fast-forward to the present day and the club's reach has extended far beyond the borders of the North Hertfordshire town it inhabits. From a strong start, the number of attending vehicles has more than tripled, with our record being 150 cars counted. Occupying the market square, overflow car parks and surrounding streets, H-Town Classic & Dub Club is now welcoming visitors from afar, with enthusiasts



DAVE JARROCK/PHOTOGRAHY/raedbrook.com

and members of less active clubs enjoying the fact we host our free-to-attend evenings all year round, with the exception of the last Monday in December.

When the club started, I was using a fifty-year-old Volkswagen Beetle as my daily, but a bad back made continued use of the air-cooled classic impractical. A friend loaned me her automatic-equipped W124 estate. I was bowled over by the car's perfect blend of performance, comfort and practicality. Moreover, as a drummer, I was impressed with the available space in the back of a W124 cargo carrier, which is why I went on the hunt for an example to call my own.

It was while scanning eBay auctions I spotted a C124 230E less than thirty minutes from home. Dressed in metallic blue paintwork, the pillarless coupe offered drum-friendly load lugging capabilities with the same level of refinement that'd impressed when I was driving my friend's estate. Needless to say, it didn't take long before my name appeared on the cool coupe's logbook.

Those of you who attended August's H-Town Classic & Dub Club meet will have seen my Mercedes on display. It'll be making a return appearance at our second anniversary bash, taking place from 6pm Monday 30<sup>th</sup> September. I hope to see you there! 📷

**Above** Felix with his treasured C123 230E, a pillarless coupe recently treated to a tidy set of mirror-polished AMG monoblocs

**Twitter** @felixfarleys

**Find H-Town Classic & Dub Club** across social media, including Facebook and Instagram

*From a strong start, the number of attending vehicles has more than tripled, with our record being 150 cars counted*

FROM THE  
VAULTS

1937 1938 1939 1940 1941 1942 1943



# DEEP IMPACT

As it celebrates its sixty-fifth year, the 300 SL continues to reign supreme as the definitive classic Mercedes. Born from a remarkable racer, the W198 helped put the 'super' in supercar...

WORDS **Richard Gooding** PHOTOGRAPHY **Various**

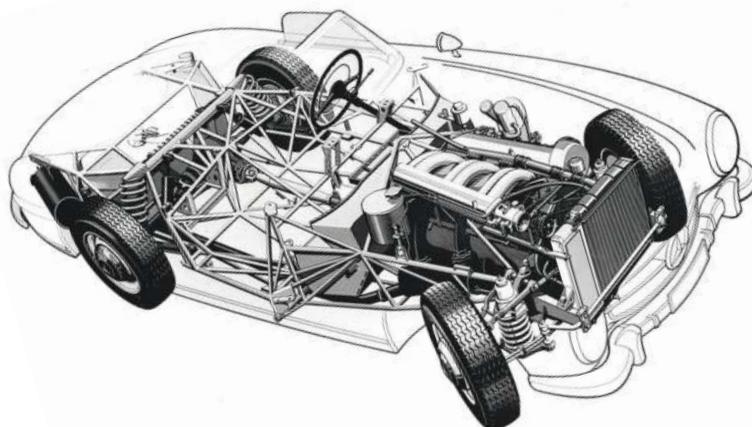
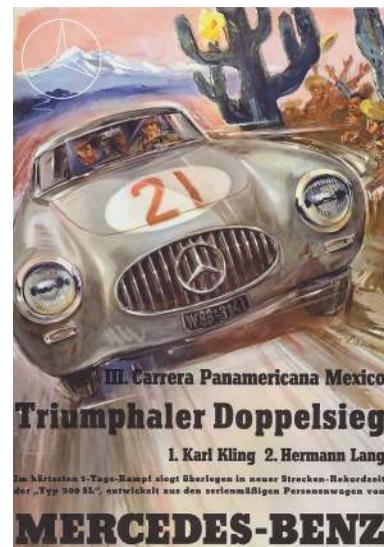
**S**himmering and raised atop a totemic pedestal, the W198 300 SL achieved deity-like status almost as soon as it was unveiled in February 1954. Seminal and sensational – and not just because of those doors – this was a supercar standard-bearer combining motorsport-derived technology, an achingly beautiful body and advanced construction to create an instantly classic Mercedes worshipped the world over right up until the present day.

In 1951, following the devastation of the second World War, Daimler-Benz decided to restart its racing programme to reassert a sporting image part-established by the pre-war Silver Arrow monsters. Leading the charge would be a new race car destined to use a version of the three-litre M194 straight-six engine from the W186 300 Adenauer luxury tourer. Consequently, Chief Development Engineer, Rudolf Uhlenhaut, designed a lightweight, rear-wheel drive chassis supported by a tubular spaceframe. The plan

**Above** It's easy to see why the W198 300 SL has gone down in history as one of the most beautiful and most desirable cars ever built

1944 1945 1946 1947 1948 1949 1950 1951 1952 1953

1954



was to produce a platform strong enough to deal with the rigours of racing, but light enough to be competitive. The resulting advanced-welded steel skeleton was the perfect solution.

### IN THE FRAME

Boasting avant-garde technical features, Uhlenhaut's tubular framework comprised pyramid arrangements and surrounded the passenger compartment in a bid to promote increased stability. As wide as possible for structural rigidity, a happy coincidence was that it also gave the 300 SL its trademark gull-wing doors. Sitting above the frame, the removable and curvaceous body was designed to be aerodynamically superior; the new coupe's roof was as narrow as possible, while the aluminium body was devoid of any extraneous detail. Fluid lines meant an enviable drag coefficient, with the new Mercedes racing baby reportedly good for a top speed of 180mph.

Given factory designation W194, the car's M194 six-pot was canted over beneath the low bonnet for further aero advances. The engine also featured

twin Solex carburettors from the W188 300 S, as well as dry sump lubrication. A diagonal aluminium head and larger valves helped power climb to 170bhp with maximum torque of 153lb-ft. Four-wheel independent suspension was also specified, but as the rear swing axle was only joined at the differential, the slippery SL would later earn a reputation for twitchy high-speed handling.

On 12th March 1952, the W194 broke cover on the Stuttgart-Heilbronn motorway. Fidgety rear end or not, the car was hugely successful on the track. In fact, few could have predicted how sensational the 300 SL racer would be – on its debut at the 1952 Mille Miglia, the car scored a second-place finish, while at the same year's 24 Hours of Le Mans, the gull-winged speed machine took both first and second place at race end. The SL was famously victorious at the Carrera Panamericana, too. This despite a vulture flying through the windscreen of the W194 driven by Karl Kling and Hans Klenk!

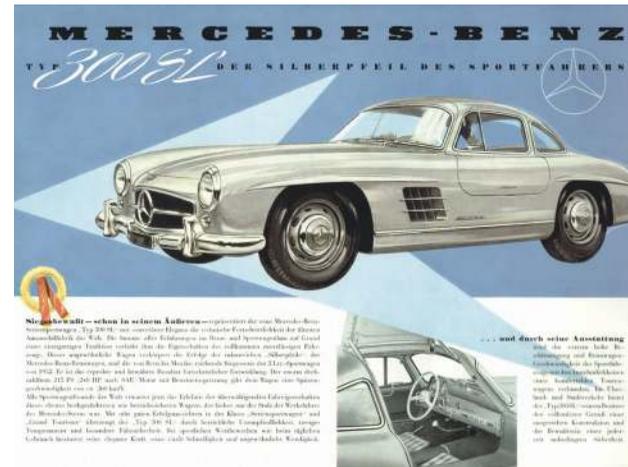
These triumphs of track and street circuits buoyed the boys at Benz to improve the car still

**Top** Mercedes motorsport posters celebrate the model's unrivalled racing success

**Above** This factory cutaway diagram illustrates Uhlenhaut's complex chassis framework



1939 1940 1941 1942 1943



**States of play**

Based on the production 300 SL Roadster, the 300 SLS was specially developed for the 1957 American Sports Car Championship (ASCC). Two cars were built to promote sales in the US, and after the Sports Car Club of America refused to accept the car for the standard production class, it was slimmed to 970kg to enable entry to the Sport Class D instead. Paul O'Shea steered the SLS to ASCC glory, following his 1955 and 1956 wins in a 300 SL.

further, leading to the 'Hobel' W194/11 prototype of 1953 gaining fuel injection and an even lighter body. Sadly, the 212bhp racer failed to attack the asphalt, Mercedes deciding to switch its focus to Formula One instead. Nevertheless, the momentum and results from the W194 project paid dividends when US-based European sports car importer, Max Hoffman, badgered Benz with the promise of an order for 1,000 two-seaters resembling the famous Le Mans winners. Sensibly, Mercedes bosses saw the benefits of establishing the marque in the lucrative North American automotive market and, in February 1954, the W194 racer became the W198 passenger car.

Exhibited at the International Motor Sports Show in New York City, the W198 300 SL proved Hoffman's instincts to be correct (this is the guy also responsible for the development of Porsche's 356 Speedster) when it became an instant hit. US buyers may have been able to buy two Corvettes (or a pair of Jaguar XK140s in the UK) for the DM29,000 being commanded for a single gull-winged Mercedes, but the Stuttgart newcomer was genuinely packed with motorsport-derived

technology. Our favourite manufacturer was effectively offering a true race car for the road!

The street-smart 300 SL took many of its styling cues from the abandoned W194/11 race car. The more upright grille and headlights, the side and rear roof vents and the less voluptuous appearance stemmed from the impotent motorsport machine, yet head styling honcho, Friedrich Geiger, managed to give the W198 an identity of its own. Bumpers made the car road legal, while wheel arch eyebrows were welcome aesthetic flourishes. Inside, leather and chrome finishes provided luxury, materials accompanied by the functionality of a tiltable steering wheel allowing for a more comfortable driving position and easy stepping in and out of the cockpit. True to supercar form, practicality was sacrificed in the name of performance, as evidenced by the spare wheel living in the boot above the fuel tank, allowing only the space behind the seats as a luggage area.

Technically, the W198 was more advanced than the car from which it was derived. Unique among the era's series production sports cars, fuel injection boosted power by 40bhp over the carb-

1944 1945 1946 1947 1948 1949 1950 1951 1952 1953

**1954**

**Facing page** The W198 300 SL debuts at the 1954 British International Motor Show, an event held at Earls Court Exhibition Centre until 1978

fed W194. A 237bhp W198 with a sports camshaft was also available. Weight distribution was a perfect 50:50 and, though the body was steel, aluminium doors, bonnet and boot lid meant the car tipped the scales at just 1,295kg. Performance was fantastic, too! The 0-60mph dash was done and dusted in 8.8 seconds, with a top speed of 161mph available, dependent on axle ratio. The fastest production car of its time, the 300 SL road car offered air-cooled, finned drum stoppers, with a brake booster and shoes four-inches wide.

### WORTH THE WEIGHT

For more startling performance, a lighter, all-aluminium body was available from the factory. Taken up by only twenty-nine customers, the revised metalwork dropped overall weight by a huge eighty kilograms. A one-off fibreglass-bodied 300 SL was also created, notable for its Mercedes 220 indicators and its non-flush doors.

In March 1957, the 300 SL Roadster was presented at the Geneva Motor Show. An open-top version of the coupe, the two-seater was again championed by Hoffman, who forecast



big sales. He was right, of course – by the time production ceased in 1963, the al fresco SL had shifted significantly more units than the closed car, which had been discontinued six years earlier. The new structure also allowed for a larger luggage compartment (helped by an underfloor spare tyre, along with a smaller fuel tank). The cloth roof of the new boulevard-cruising Benz was stored under a flap behind the seats, with the look of the racy Roadster similar to that of the less swish W121 190 SL. Face on, the important visual distinction was the 300 SL's grouping of all lights in a single lens.

Unsurprisingly, the drop-top's key componentry was similar to the coupe, although handling and comfort were improved by the addition of revised rear suspension borrowing the single-joint cross shaft and lowered pivot axle from the W180 220a. Fitted with a compensating spring, it was an arrangement Uhlenhaut had wanted for the coupe, but one which was dismissed due to lofty production costs. At 1,425kg, the Roadster weighed more than the coupe, and yet, the 237bhp engine was more than capable of propelling the newer model with ample pace. A

**Top right** 300 SL production taking place on the Sindelfingen assembly line in late 1958

FROM THE  
VAULTS

1947 1948 1949 1950 1951 1952 1953

1954



**Above** More than sixty years of drop-top tradition, starting with the W198 300 SL

**Right** The 1955 300 SLR 'Rennsportwagen', a car hailed by Sir Stirling Moss as the greatest motorsport machine ever produced

revised dashboard design (including housing for oil pressure, oil temperature, water temperature and fuel level gauges) was also fitted.

A removable steel hard-top became a DM1,500 cost option in 1958. Featuring a wraparound rear window, the part was as much about promoting clear vision as it was about emphasising good looks. Dunlop disc brakes arrived in 1961 and, a year later, a modified engine with a light-alloy block nestled under the double-dome bonnet of the final 210 300 SLs built. On 8th February 1963, W198 production came to an end, but not before 1,400 coupes and 1,858 Roadsters had rolled off the production line at the Sindelfingen plant.

### RUNAWAY RACER

As was the case with the W194, the W198 wasn't just a pretty face. Two special 300 SL Roadsters designated SLS were built for racing, yet both gull-winged and drop-top SLs proved competitive in motorsport. Not the most obvious choice of car for loose surface action, a 300 SL coupe won the 1955 European Rally Championship with former Porsche pilot, Wener Engel, in the hot seat. The model went on to secure class wins at the 1955 Mille Miglia, as well as the 1956 Rome-Liege-Rome

race. Interestingly, the 300 SLR, which Sir Stirling Moss famously referred to as the greatest racing car ever built, owed more to the W196 Formula One car than it did the 300 SL. Moss won the 1955 Mille Miglia with the SLR, a model which also claimed victory at the year's Targa Florio, but the Carrera Panamericana-bound 300 SL/SLR hybrid penned by Uhlenhaut failed to realise its potential because of the cancellation of the event in the wake of the devastating 1955 Le Mans disaster and concerns over driver and spectator safety. Pity.

A technologically advanced supercar with glamorous looks and genuine motorsport pedigree, the 300 SL isn't just a magnificent Mercedes, it's classic car divinity. Low production numbers and celebrity owners have kept values high. Juan Manuel Fangio, John Surtees, Pablo Picasso, Ralph Lauren, Tony Hancock and Bernie Ecclestone all fell for the 300 SL's charms. Film star keepers have included Yul Brynner, Tony Curtis, Clark Cable, Sophia Loren and Paul Newman, all sprinkling Hollywood magic on this most majestic of Mercs. Sadly, this means you're probably going to have to be a filthy rich 'sleb to own one in the present. We can dream, though. After all, the W198 300 SL is that kind of car!

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# Take a **brake**

Continuing our series promoting advanced motoring techniques, professional driving consultant, Neil Furber, demonstrates how to brake and shift gears with finesse...

**L**ast issue, we explored different steering grips and techniques. Many of you might think the logical next step would be to discuss cornering, but braking and gear selection comes first. After all, a well-executed and composed braking phase forms the foundation of good cornering, but rather than simply slamming on the anchors and banging down the 'box, there's an art to braking and selecting a gear. If you can develop finesse with these techniques, you'll find greater pleasure from your Mercedes, especially if you're in charge of a car with manual transmission and can master 'heel and toe' and double clutching. For now, however, let's focus on vision, timing and 'fruit under pressure'.



Neil Furber is *Mercedes Driver's* resident driving expert. With a technical background as a mechanical engineer in the Formula One industry, he brings a unique technical insight to driver coaching. Splitting his time between the French Alps and the UK, he coaches drivers through his brand, Drive 7Tenths ([drive7tenths.com](http://drive7tenths.com)).

## VISION AND TIMING

Good vision is the most important part of preparing for a corner. During a session with a professional driving coach, you'll be encouraged to look further ahead and consider more information far earlier than you're used to, regardless of whether you're on road or circuit. We can all look, of course, but it's our ability to 'see' important features in the road and process information ahead of time which creates the basis for good decision making when cornering. If planning is limited, braking



becomes rushed, the gear selection fumbled. Preparing for a corner with good vision adequately sets you up for the next part of the process: timing.

If you wish to develop finesse with respect to braking and changing gears, timing is the key differentiator between mastering the art and making a mess of the job. We all have the basic skills to press pedals a set distance or to a given pressure, not to mention deciding which order to press them. It's the timing that needs our close attention.

## TECHNIQUE

For the moment, we'll assume vision is effective and we have a plan for the corner we're approaching. We've considered sight lines through the bend, its radius and the likely route for the next straight or corner. Perhaps we've even planned for the road surface, other traffic, lane positioning and likely or developing hazards as we prepare for braking. This is where the timing starts.

I'm often asked to reveal the correct time to start braking for a corner. I usually reply by asking when the person posing the question would like to finish braking! The braking period has a pressure profile and a duration. If we have an end point in mind, our start point becomes clearer due to being a function of current speed and how hard we wish to brake. If we start at the other end (the start point) of the spectrum, how hard we should brake or when to let go isn't quite so clear.

Typically, the majority of drivers don't like braking hard. Doing so is uncomfortable due to the high g-forces at play. And yet, for the most part, when I start to work with a driver wishing to learn about piloting his or her Mercedes in a more spirited fashion, their initial attempt almost always follows a pattern of overdriving at the entry point to the corner, with late pressure build-up leading to excessive braking when they wish to turn in. A typical example would be arriving a couple of car lengths from the bend with no plan to get around it effectively. The driver brakes too late and then forgets or rushes a gear change. Steering input is required, but entry speed is uncomfortably high.

The driver still has the brakes activated and starts steering whilst worrying about speed. If the car features a manual gearbox, the clutch continues to rise. We're effectively coasting through the bend on the brake. There's absolutely no way the car is balanced. Moreover, there's no chance the driver is planning a good exit from the bend!

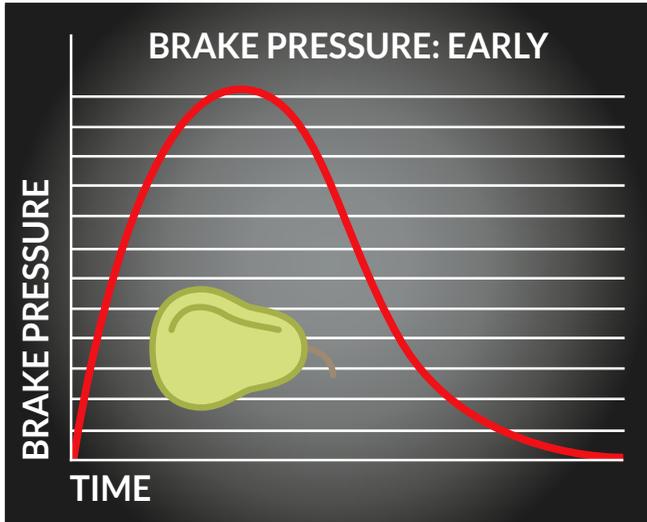


## BACK TO TIMING

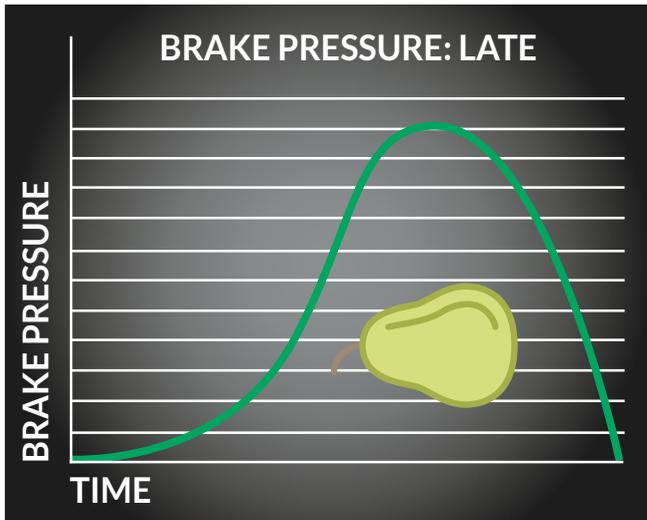
As you can see, by looking further ahead and planning the braking phase, there's no longer a need to brake late and all the way into the bend, nor is there a need to brake ever harder as we approach a corner. Simply put, we need to start slowing earlier. If we have an idea of speed and the appropriate gear for the point where we'll start turning the steering wheel, we can begin to brake early enough to reduce speed under control. We can take our time

with a nice, smooth down-change and look to balance the car for corner entry. By 'balance', I mean to drive the car with a light throttle pedal pressure to maintain steady speed.

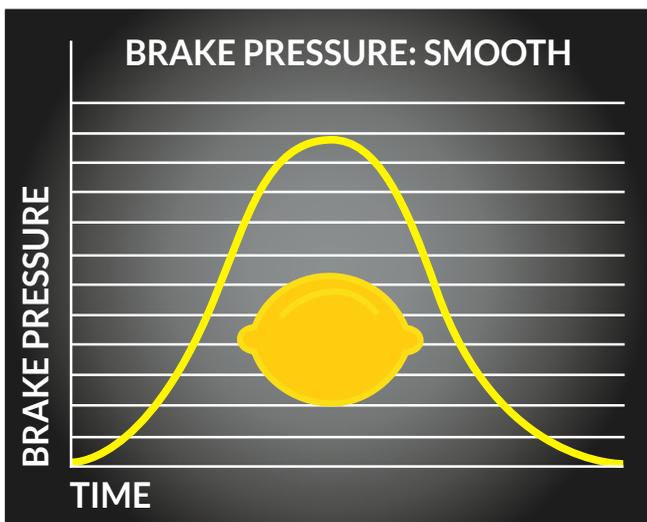
No matter what we may like to tell others, we're better at performing a single action than we are multi-tasking. In other words, if we can break the corner down into phases and complete each action individually, it's much easier to perform well in the next task.



▶ When viewed as a graph depicting brake pressure and time, it's clear to see early braking results in a line following the shape of a pear.



▶ Just like undesirable early braking, late braking follows the same pear-shaped line, but does so in reverse.



▶ Smooth braking is what we're trying to achieve, a successful action which produces a lemon-like shape when charted on a graph.

## CORNER APPROACH

- Be sure to look further ahead and use good vision to plan for the corner
- Start braking with an entry speed, gear and position in mind
- Split tackling a corner into different tasks: main deceleration, gear change(s) towards the end of braking and balancing the car ready for corner entry
- Smooth transitions on and off the pedals, allowing time at the clutch biting point (if applicable)

## FRUIT UNDER PRESSURE

We've covered timing, but what of brake pressure? It's common to assume driving on track needs maximum braking, with drivers stamping on the stoppers to get good lap times. For the purpose of this article, we'll ignore how fast you can travel around a circuit, not least because it's unlikely to be the key consideration for Mercedes Driver readers looking to improve their overall driving technique. We'll also ignore braking through lifting-off or down-changing for the time being. After all, most of the time, if you need to slow down, there's likely to be braking involved.

A nice way to illustrate good braking technique is to consider a pear versus a lemon. For the more technical among you, compare skewed distribution to normal distribution (or a 'bell curve'). The pear is thin at one end and fat at the other. This represents low braking pressure early on, building to the higher pressure late in the braking phase. We don't want this to happen under any circumstances. The lemon profile is better: thin at one end, fat in the middle, thin at the other, representing a smooth build-up of brake pressure to a given value before a smooth reduction in pressure before the corner. This process makes it easier to focus your attention on smooth gear changes and, crucially, to bring the nose of your Mercedes back up in order to balance the chassis in readiness for the corner.

A further technique considers the pear spun around. High pressure is built quickly-yet-smoothly, with a long tapering-off of pressure. We'll leave this approach for another time, suffice to say the most overlooked contributor to braking finesse is releasing the pedal. Rather than jumping off and feeling your body jolt back into the seat, a progressive release to ease vertical load off the nose of your Mercedes is much better. You and your passenger will be eased back into the seats far more comfortably too. Don't believe us? Give it a try!



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1968/9, finished in unmarked gleaming silver with as new soft black hide interior, hard and soft tops, automatic, p/steering, stereo system, Mercedes overmats, only 73,000 miles £1000s spent to keep this garaged kept sports car in magnificent condition. Only 1 lady previous owner. Folder of invoices/old MOTs/ original handbook, all tools. A breathtaking example.

**Mercedes-Benz 280SL Sports Pagoda** £129,500

1987 finished in Nautic Blue with dove grey hide interior, head rests, rear seats, hard and soft tops, tinted glass, power windows, central locking, power steering, heated seats, abs brakes, alloys, cruise control, stereo system, long last owner ship, garaged from new, with impeccable service records, thousands, spent to keep this car in the fantastic condition it is in today, drives like new.



**Mercedes-Benz 420SL Sports** £38,750



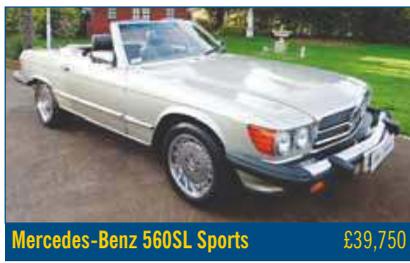
1980 finished in glacier white with tan hide interior, headrests, hard and soft tops, tinted glass, power windows, power steering, automatic, over mats, original stereo, factory alloys, only covered 45,000 miles from new, full Mercedes history, all old MOTs and invoices, complete with original tools, recent full service, garaged from new, one of the finest to be on offer.

**Mercedes-Benz 350SL Sports** £35,750

1984 finished in Astral Silver with Navy Blue hide interior and Blue dashboard, walnut veneers, headrests, Blaupunkt stereo, hard top, soft top as new, alloys, tinted glass, p/mirror, rear seats, h/rests, automatic, p/steering, p/windows, only 61,000 miles, full service history and accompanied with a set of old MOT certificates, with original paperwork and invoices and original hand book in wallet. Garaged from new, drives like new.



**Mercedes-Benz 380SL Sports** £37,500



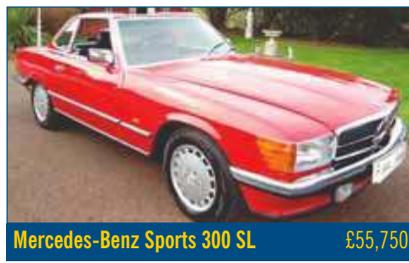
**Mercedes-Benz 560SL Sports** £39,750

1988, LHD, finished in Smoke Silver with Brazil hide interior, auto, headrests, hard and soft tops, centre armrest, over mats, first aid kit, CD stereo system, air-bag, air-con, power mirror, cruise control, ABS, power windows, SRS, outside temperature gauge, tinted glass, expensive Mercedes wheels, only 38,000 miles, service history, drives like new.



**Mercedes-Benz 280SL Sports Pagoda** £135,750

1968, brilliant Artic White, superb contrasting interior, hard and soft tops, auto, PAS, CD stereo system. One of the finest having had thousands spent through its life, and only used on summer days, only 58,000 miles, supplied with original handbook, etc. It would be very difficult to find another even come close to this.



**Mercedes-Benz Sports 300 SL** £55,750

1987, finished in gleaming Signal Red, with soft black hide interior, hard & soft tops, headrests, stereo system, ABS brakes, auto, power steering, tinted glass, alloys, power windows, soft top never used. Garaged and stored for many years hence very low mileage of only 23,500, with service book and old MOTs. This Mercedes could easily be mistaken for new.



**Mercedes-Benz 230SL Sports** £89,750

1966, Porcelain White with as new Black hide interior, auto, PAS, CD stereo system, hard and soft tops, known to us for many years, original service books etc. Entered in many events in UK and Europe. Fitted stainless exhaust system, recent overhaul. Over £10,000 spent in the last few years making this car one of the finest.



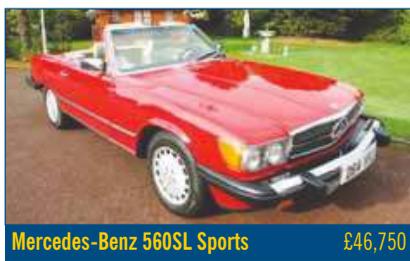
**Mercedes-Benz 560SL Sports** £38,500

1988, left hand drive, finished in Impala, metallic colour-coded bumpers, contrasting interior headrests, over-mats, hard and soft tops, auto, power, cruise control, ABS, air-con, air-bags, stereo and CD system, SRS, alloys, complete with all tools, 43,000 miles, two owners, garaged from new, service history.



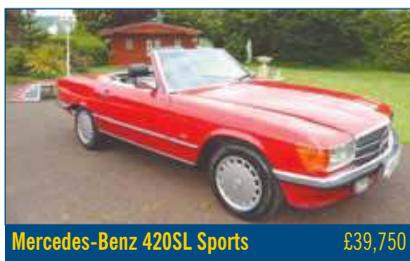
**CHOICE OF 4**  
**Mercedes-Benz E240** £4,750

1998, 6-door limousine, finished in black with superb dark blue interior, three rows of seats, power glass divider, air-con, power windows, automatic, alloys, power steering, full Mercedes history, only two owners, drives like new, absolute gift.



**Mercedes-Benz 560SL Sports** £46,750

1987, left hand drive, gleaming Signal Red with Beige hide interior, headrests, centre arm rest, hard and soft tops, this flag ship SL has power windows, tinted glass, stereo system, light up vanity mirrors, cruise control, air-con, power mirrors, ABS, air-bags, alloys, over-mats, only 27,000 miles from new, with FSH, 1 owner, garaged and pampered.



**Mercedes-Benz 420SL Sports** £39,750

1989, one of the last of this model, finished in gleaming Signal Red with superb black hide interior, piped red, rear seats, hard and soft tops, tinted glass, power windows, auto, cd player, alloys, over mats, full service history, this car is just stunning probably one of the finest.



**Mercedes-Benz 560SL Sports** £49,750

1988, LHD, finished in gleaming Signal Red with tan hide interior, headrests, hard and tan soft tops, power windows, tinted glass, central locking, air-con, cruise control, stereo system, ABS, alloys, SRS, air bags, expensive Mercedes car cover, auto, power steering, only 19,000 miles from new, service history, one owner.

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4. Do you expect more peace and quiet in your car than you get at-home?
5. Can you look nonchalant when people turn and stare at your car?

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A close-up, high-angle photograph of a carbon fiber wheel. The wheel's surface is a complex, woven mesh of black and grey fibers. Several silver-colored bolts are visible, securing the wheel to a hub. A circular logo is prominently displayed on the right side of the wheel, featuring a stylized 'CR' in blue and orange, with the words 'CARBON REVOLUTION' written below it in a smaller font. The lighting is dramatic, highlighting the texture of the carbon fiber and the metallic sheen of the bolts.

# Reinventing the wheel

In the second part of our guide to understanding alloys, we look at the different properties and methods used to make wheels, as well as the finishes that keep them looking tip-top...



## ALLOY COMPOSITION

Most manufacturers keep the materials used in the composition of their wheels a closely guarded secret, although it's true to say that the most common ingredient is a derivative of aluminium alloy known as LM9. This compound includes copper, silicon and titanium. It's light and strong, making it perfect for motorsport and fast-road use.

It's possible to make wheels from other materials, including magnesium or carbon-fibre. Magnesium wheels can be as much as 30% lighter than alloys, meaning that more material can be used to create greater strength without increasing overall weight. This explains why magnesium wheels were so popular with motorsport teams during the 1980s and 1990s. There are, however, drawbacks. For a start, magnesium is porous and highly combustible. The material has to be carefully stored, and wheels made out of the stuff have a short shelf life before needing to be replaced. They're banned in many modern motorsport environments on the grounds of safety.

Carbon-fibre wheels are exceptionally light and strong, but the astronomical cost of production means that they're seldom used on anything other than big budget sports cars.

## CAST ALLOYS

The vast majority of alloy wheels will have been produced using a casting method. This process is relatively inexpensive compared to other means of manufacture. It's easy to control and allows for quick production, keeping the price of the finished wheel low.

There are two main casting methods used in alloy wheel production: gravity casting and negative pressure casting. Gravity casting involves pouring molten alloy into a mould and allowing it to cool. Once cooled, the mould is opened and the cast wheel is removed.

Negative pressure casting works in a similar way, but instead of pouring molten alloy into a mould with a gravity cast system, it's drawn up into the mould using a high-pressure vacuum. This helps to eliminate gas that can sometimes get trapped as a result of the casting process, resulting in a stronger wheel that's less porous.





## FORGED WHEELS

Unlike casting, forging an alloy wheel doesn't involve melting the alloy into a liquid state. Instead, the forging process uses intense heat (to make the alloy malleable) and enormous pressure to push the ingot of alloy into the shape of the wheel. One of the main advantages of the forging process is the way it affects alloy's grain structure; the ingot would have been cast, and as such, the grain structure will be non-directional. Effectively, it would be as if it landed when poured during the casting process. With huge pressures during the forging process pushing the material in the desired direction, the grain structure is manipulated to provide hugely improved strength.

This process also means that the grain structure can be forced to run from the centre of the wheel outwards, along the wheel's spokes and not always in the same direction. This is largely the reason why a forged alloy is up to three hundred times stronger than a regular cast wheel.

When the forging process has forced the alloy into a wheel-shaped blank, the blank can be machined into the final product. This is usually carried out by a CNC milling machine and involves turning the wheel to the final dimensions. The spokes are milled, as are the bolt holes at the required PCD and the mounting hub at the required offset.



## FLOW-FORMED WHEELS

A fairly recent (but proving popular) technique in the world of alloy wheel construction is a process known as flow forming. It sits neatly between the forging and casting process and results in a wheel that's lighter and stronger than traditional cast alloys, but not as expensive as a forged wheel. The process of flow forming involves spinning the wheel after it has been cast, with pressure then being applied to the inner barrel of the wheel while it's spinning. This stretches and compresses the alloy (similar to the forging process), thereby increasing the wheel's tensile strength and resistance to shock. A flow-formed wheel is lighter and stronger than a traditional cast alloy and has a higher load capacity.



## SPLIT RIMS

Split rims are made from two or three separate components. The most common split rim is a three-piece design comprising an inner rim, a centre and an outer rim.

Split rims can trace their history back to motorsport in the 1960s, when limitations to the casting process meant that wheels could only be produced with widths of around six-inches. To overcome this problem, wheel manufacturers used a cast alloy centre (modern split rims from the likes of Image Wheels use a centre CNC-machined from billet alloy) and then bolted-on spun aluminum inner and outer rims to form a three-piece wheel. By using different size rims, it was easy to alter the width and offset of a wheel.

It's also possible to buy a two-piece split rim, where the centre also includes the inner or outer lip as part of the same piece.

A spun aluminium inner or outer lip (whichever isn't part of the centre) is the bolted to the centre in order to form the completed wheel.

Split rims used to be very popular in circuit racing because they're light and will accommodate large tyres, but they're not much good for road use due to the spun aluminium being so soft (if you used a split rim on a rally stage, it'd be deformed before you reached the finish line!). Today, split rims are often fitted to older cars as a styling upgrade. They certainly look cool, but the soft aluminium rims require the driver to avoid potholes at all costs! And keeping that unprotected chrome safe against road salt and other detritus may end up with you spending more time cleaning your wheels than you do driving your car!



## CENTRE-LOCK WHEELS

Unlike conventional wheels, centre-lock rims don't take their drive from the wheel studs. Instead, they feature a splined centre that mates to the wheel hub, else they have drive pegs in the hub that slot into the back of the rim. A centre-locking nut then holds the wheel to the hub. This allows for a precise and quick wheel change, ideal for motorsport applications. Before you get too excited, keep in mind that centre-lock wheels require a completely revised, one-piece hub flange (or adaptors) to make them work. They're costly and are rarely used on anything other than high-end motorsport machinery.



## WHEEL NUT INSERTS

Due to the fact that alloy wheels are softer than the steel studs or bolts that are used to secure them, motorsport rims often feature a steel insert. This prevents the alloy wearing away against the steel studs or bolts during frequent wheel changes. The majority of production and aftermarket alloy wheels don't include steel inserts because most road wheels aren't changed often enough to require them.



## FINISHES

Aluminium alloys used to produce wheels offer many benefits, including strength, reduced weight and heat dissipation. The one thing they don't offer is protection from the elements! Therefore, alloy wheels need to be coated or treated to ensure they can cope with the negative effects of road salt, brake dust, water, dirt, oxidation and the muck they'll encounter on a day-to-day basis.

The most common finishes are paint and powdercoating, or as is increasingly the case, a combination of the two. Painting is quick, easy and relatively cheap. Powdercoating is more involved, but offers better durability and resistance to stone chips and flaking. In the case of 'Shadow Chrome', wheels are coated in a base of solid black powdercoat and then painted in an light dusting of application-specific silver before lacquer is applied.

Both paint and powdercoat finishes are great for protecting the alloy material, but they do change the finished colour of the wheel. If you want a finish of raw alloy, then diamond-cutting is the way forward. It's a process that involves using a specialist cutting machine to skim the surface of the alloy wheel (ordinarily after paint or powdercoat has been applied) in



order to reveal fresh alloy. It's a popular finish seen in each corner of many modern sports cars. The downside to diamond-cutting is the fact that the exposed part of the wheel needs a specialist lacquer to protect it from harm. This makes diamond-cut finishes more delicate than paint or powdercoated surfaces. Special wheel cleaners must be used.

Polishing is very similar to diamond-cutting, but rather than having bare alloy machined by a cutting tool on a lathe, it's buffed and polished to a high shine before being lacquered. In some cases, this is the next step after diamond-cutting,

removing score marks from the machining process to leave a high-gloss shine.

The inner and outer hoops of split rims can be left free of lacquer, but they'll require regular polishing to prevent oxidation. To get around the problem, the parts can be chrome-plated.

Another finish proving popular is modern spray film. Products from German manufacturer, Foliatic, can be easily applied directly over the top of a wheel's existing finish, quickly and cheaply changing its colour. Then, when you want to change back to the original colour, you simply peel away the spray film!



## ALLOY WHEEL CLEANERS

If you've just splashed out on new rims for your Mercedes, then you're going to want to look after them. Most alloy wheel cleaners are acid-based, and while there's no doubt that these products are effective at cutting through dirt and brake dust, covering your wheels in acid on a regular basis isn't a good idea. Moreover, it's an absolute no-go if your wheels are polished, diamond-cut or chrome-plated. Fortunately, there are plenty of specialist wheel cleaners to choose from, each with slightly different cleaning characteristics. Products such as Meguiar's Hot Rims and Auto Finesse Imperial are great for removing dirt and brake dust with little effort, while ValetPRO Dragon's Breath, Autobrite Direct Very Cherry and Power Maxed non-acidic wheel cleaner are safe to use on all wheel surfaces and coatings.

### CONTACTS

**Fifteen52** [fifteen52.co.uk](http://fifteen52.co.uk)

**Foliatic** [foliatic.com](http://foliatic.com)

**Power Maxed** [powermaxed.co.uk](http://powermaxed.co.uk)

**Bola Wheels** [bolawheels.co.uk](http://bolawheels.co.uk)

**Compomotive Motorsport** [comp.co.uk](http://comp.co.uk)

**Revo Technik** [revotechnik.co.uk](http://revotechnik.co.uk)

**Image Wheels** [imagewheels.co.uk](http://imagewheels.co.uk)

**Meguiars** [meguiars.co.uk](http://meguiars.co.uk)

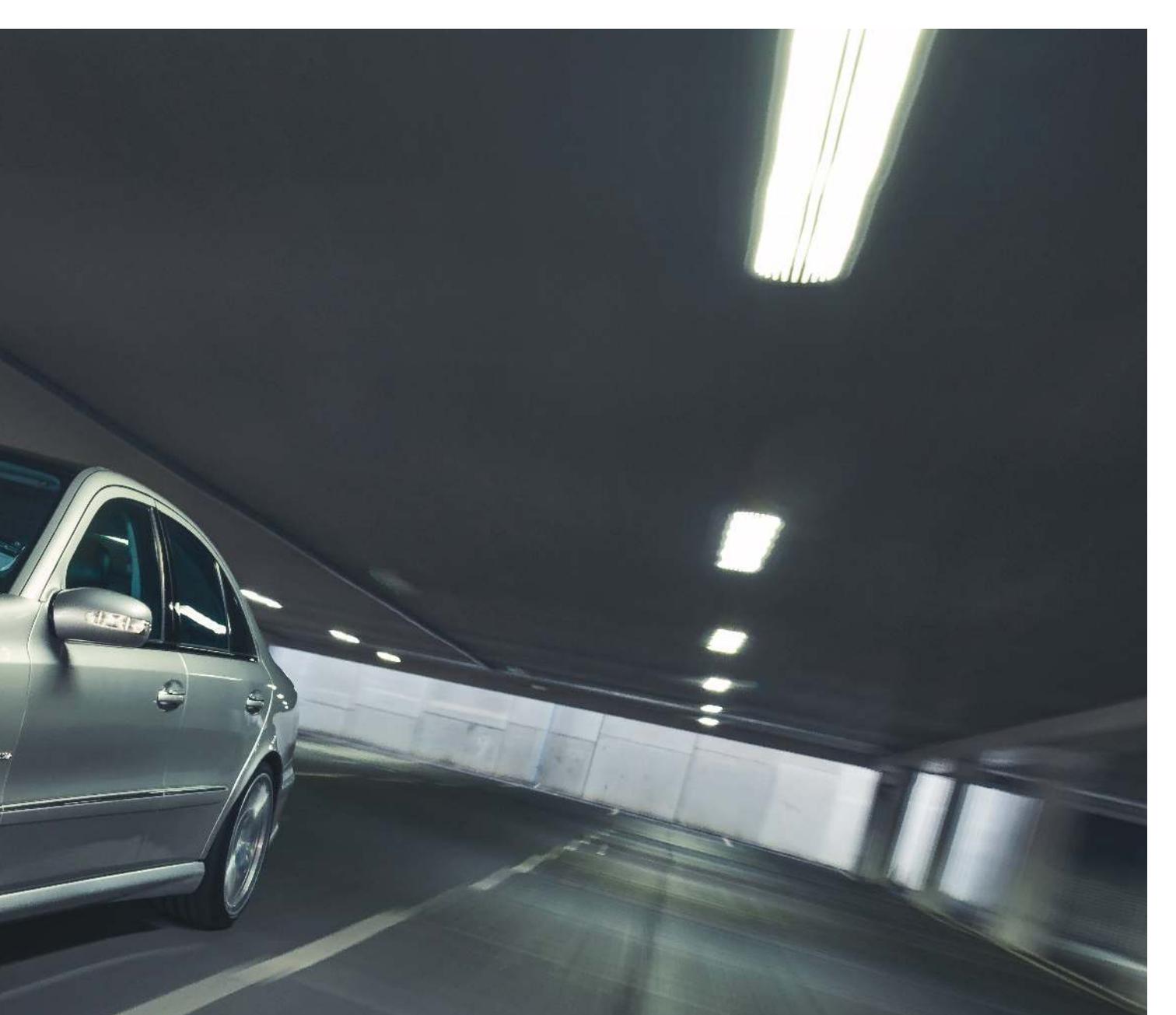
**Auto Finesse** [autofinesse.co.uk](http://autofinesse.co.uk)

**ValetPRO** [valetpro.eu](http://valetpro.eu)

**Autobrite Direct** [autobritedirect.co.uk](http://autobritedirect.co.uk)

**Cast13** [cast13.com](http://cast13.com)





# THE ONE AND ONLY

Tuning is all about standing out — and this 612bhp MKB E55 AMG is the only example of its kind on British roads...

WORDS **Emma Woodcock** PHOTOGRAPHY **Dan Sherwood**

Silver Mercedes E-Class. It's not an inaccurate description, but it misses all the captivating detail. Four pipes and bolstered arches point to an AMG, the split-spoke snowflakes (borrowed from a later CL 63 AMG) point to aftermarket tuning, the body kit confirms it. The front bumper wears a jutting, twin-level front spoiler and four fog lights, the side skirts hang lower than Mercedes ever planned and the rear apron drops deep past the quad tailpipes. Converted by German marque specialist, MKB, and developed with stability above 160mph in mind, you're looking at one of the most extreme interpretations of the E55 AMG.

That's not to say a stock W211 AMG won't stand out. Even today, against a backdrop of 600bhp contemporaries, the E55 makes a compelling case for itself. Producing 476bhp and 516lb-ft torque, the V8 four-door reaches 60mph in 4.6 seconds and thunders past 180mph, given enough space and the removal of the standard 155mph electronic speed limiter. Upon its 2002 launch, those figures were enough to cause a sensation — it's worth noting the E39-generation BMW M5 lags over eighty horsepower behind the Mercedes, while even the all-wheel drive Audi C5 RS6 hasn't the straight-line performance to keep up.

Aftermarket tuners soon spotted potential

in the eight-cylinder saloon and its unstressed supercharger. Modification packages hit the market within a year of the model's introduction, with changes ranging from mild ECU remaps to comprehensive rebuilds featuring fresh engine internals, enlarged throttle bodies and reimagined exhausts. The most extreme cars, like the MKB in our photographs, hammers past 600bhp with ease, but even a Stage 1 package — a collection of modifications comprising little more than an ECU software calibration, a new air intake and the option of a smaller supercharger pulley — can yield up to 540bhp.

### PEOPLE PLEASER

Once the reserved of the well-heeled, the twin winds of time and depreciation now place the E55 AMG in front of a far wider audience. Careful searching can deliver privately offered, high mileage cars below £10k, while a budget of £15k allows access to a range of lightly used examples. New keepers can also avail themselves of the tuning scene which helped to secure the model's reputation: established names like Kleeman, RENNTech and MKB itself all continue to support the twin-intercooled M113 5.5-litre supercharged V8, commonly referred to as the M113K (Kompressor). Best of all, there are changes to suit all tastes and budgets. A range of smaller providers



## ESTABLISHED NAMES LIKE KLEEMAN, RENNTech AND MKB ALL CONTINUE TO SUPPORT THE M113 5.5 SUPERCHARGED V8



**Above** Silver paintwork and AMG package combine to make the perfect starting point for a ballistic road racer that manages to avoid attracting too much attention

**Left** It may have a snarling supercharged V8 up front, but the cabin of Toby's MKB-tuned AMG has all the trappings of class-leading comfort



stock everything from larger, louder exhaust systems to suspension lowering modules, while Quaife's torque-biasing limited-slip differential is a popular swap for owners chasing traction and rear axle predictability.

Buyers with patience, discernment and plenty of luck can take a different route. Period tuning projects occasionally present themselves as available for purchase and, when they do, new owners with the knowledge and research abilities to understand these machines find themselves behind the wheel of some of the rarest, fastest machines in Mercedes history. Toby Smales is in exactly that enviable position. Owner of the only MKB-modified Stage 3 E55 AMG in the UK, he's got 612bhp and 590lb-ft torque under his right foot and can't pull into a petrol station without turning heads. MKB isn't a well-known name in Britain. It's not even the most famous three-letter acronym affixed to the Mercedes marque, and yet, the Winnenden firm has more than enough provenance to back up its reputation for extracting lofty power figures from Mercedes engines. The 'M' stands for the surname of company co-founder, Erhard Melcher, a renowned automotive engineer whose initial also appears in AMG. Yes, you read that correctly. Mr Melcher was one of the founders of AMG Engine Production and Development,

now a subsidiary of Mercedes-Benz. Away from Affalterbach and under the stewardship of current owner, Panagiotis Avramidis, MKB has redoubled its marque focus and offers both performance and aesthetic improvements for the entire Mercedes-Benz product line.

## NEW FRONTIERS

Shock and awe has always been an MKB trademark. The company's history is peppered with range-toppers which still impress today. MKB can push the C216 CL 65 AMG past 750bhp, has stretched its skills by dropping a twin-turbocharged V12 into an early GL 500 SUV and punched its SL 65 AMG Black Series conversion to 1000bhp and a massive 959lb-ft torque.

The firm's W211 E55 AMG conversions don't quite reach those mind-boggling heights, but we'll happily bet no owners have ever left MKB feeling short-changed. Even the firm's Stage 1 offering for the stonking saloon brings power up to 532bhp and 542lb-ft torque. Stage 2 (a bundle adding new air filters, stainless steel exhaust manifolds and aggressive camshafts) pushes those numbers to 587bhp and 564lb-ft. Bolster those changes with an MKB supercharger pulley, clutch and an enlarged throttle assembly and the E55 reaches the 612bhp of Stage 3. Fitted to an E55 AMG

## DRIVER Q&A



### TOBY SMALES

**First Mercedes**  
This one

**Favourite Mercedes**  
C209 CLK DTM AMG

**Best thing about your W211 E55 AMG**  
The supercharger

**Worst thing about your W211 E55 AMG**  
The fuel economy on this thing is ridiculous

estate, the full conversion yielded a solid 201.2mph at the Nardo test track in Italy.

European buyers could go no further, but MKB wasn't done. Freed from the constraints of EU emissions legislation, the company went all out to develop the 55/8K final stage. Further engine upgrades include increased supercharger boost, larger intake and exhaust valves, not to mention the optional removal of catalytic converters. Strengthened by a forged crankshaft, forged pistons and titanium connecting rods, the result is a reliable 671bhp and 664lb-ft torque. Not that Toby is left wanting. From the moment he first set eyes on his MKB-modified E55, he's been entranced by its combination of animal performance and jaw-dropping style. "The car was sitting outside my place of work," he remembers. "It looked totally unreal." A PalmerSport circuit driving instructor and competitor in the BRSCC Toyo Tires Porsche Championship for independent marque specialist, PIE Performance,

**Below and facing page** A massive 612bhp is developed by a range of MKB engine upgrades, including updated supercharger equipment

Toby has taken all manner of supercars and trackday specials to their outer limits, yet the MKB instantly rendered him spellbound. "It's one of the fastest cars I've ever been in charge of," he smiles. "By the time I'd driven it to the next village and back, I was totally sold. I've spent time behind the wheel of various Ferraris, Maseratis, Lamborghinis and more, but this MKB is easily a performance equal."

### COMPLETE PACKAGE

As a full MKB conversion, his E55 doesn't just derive its extra performance from the sledgehammer up front. The car also benefits from a strengthened transmission, a multi-disc limited-slip differential with a forty-five percent locking ratio, a remapped gearbox control unit and a shorted final drive. Running a ratio of 2.82:1, the back axle is far punchier than the stock Mercedes 2.65:1 item, aiding the engine in its drive for breathtaking acceleration. »

## FROM THE MOMENT HE FIRST SET EYES ON HIS MKB-MODIFIED E55, HE'S BEEN ENTRANCED BY ITS ANIMAL PERFORMANCE AND JAW-DROPPING STYLE





Of course, all that performance has to find its way to the ground. This is where Toby's car steps away from the MKB storm. Where the German tuners generally fit a sports lowering kit working with original air suspension to drop ride height, this E55 wears KW Suspensions Variant 2 coilovers. Manually adjustable for both height and rebound settings, the new dampers offer the strength and control needed to take on a UK back road. "The previous owner perfectly configured the system," says Toby. "It's stiff enough for the track, but retains a nice balance between cruising and performance." Michelin Pilot Sport 4S tyres (a recent addition) provide the traction to match. "This E55 will still happily spin its wheels up to third gear from a standing start, but with a more progressive throttle application, the new rubber makes a huge difference."

### SERIOUS CHARGE

That's just as well. Ever since Toby convinced his car's previous owner (one of his racing sponsors) to part with its keys, the MKB has seen action at every opportunity. "I drive my E55 an hour to

### Still speedy

Toby's E55 might represent the peak of MKB's popularity, but that doesn't mean the firm has left the performance game. A highly developed MKB W204 C63 AMG track car is often seen throwing down laps at Hockenheim's annual Tuner GP, and the recent announcement of the Euro 6 compliant P 800 shows what the firm can do with the current S-Class coupe. Benefiting from MKB air filters, turbos, exhausts and ancillary modifications, the new machine makes 790bhp and 885lb-ft torque.

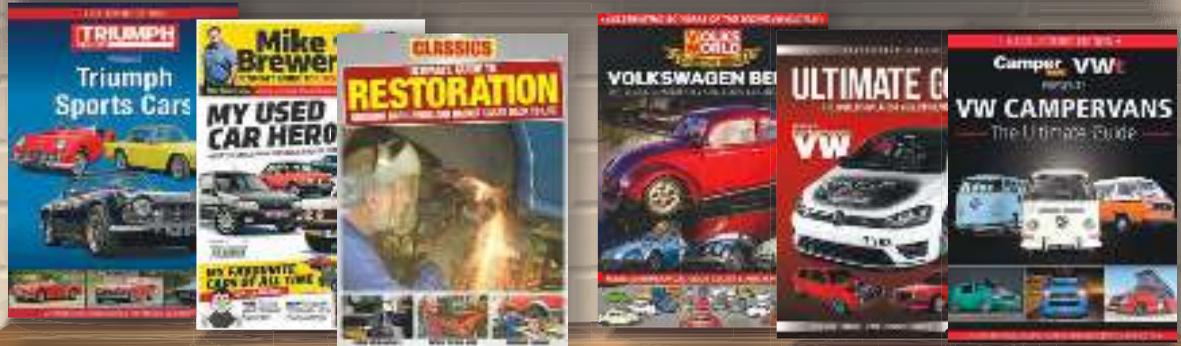
work each day. It's clearly a luxury car built for long-distance cruising," he explains, "but then you put your foot down and the world lights up. The supercharger is ready to attack with instant response, ensuring the car annihilates anything else on the road. The engine keeps pulling and pulling all the way past 160mph." There's a soundtrack to match, too, thanks to the presence of an MKB stainless steel exhaust system. "There's a low rumble when you're cruising, but hit the gas and the noise explodes. It's like having an angry tiger in the back of the car. I'm constantly being asked to peel out!"

Toby won't abandon his fast four-door any time soon. A road trip to Lake Garda and plenty of on-track activity is on the cards, while even daily driving gives him the chance to enjoy the car's unicorn status. "People are always making comments," he grins. "The sound is definitely a major attraction. It's lovely knowing I'm the only person in the country with a car built to this specification. I consider myself very lucky." From bold bodywork to all 612 ponies, there really is nothing else like this awe-inspiring AMG.



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# FULLY CHARGED

EQV is the second EQ-branded Mercedes and the world's first large electric people carrier...

WORDS **Dave Humphreys** PHOTOGRAPHY **Mercedes-Benz**

Having already rolled out the EQC and recognising the media storm surrounding Porsche's Taycan offering, Mercedes isn't wasting any time in expanding its electric vehicle product line. The second model to wear the three-pointed star and be entirely battery-powered is the EQV and, as the name would suggest, it's based on the Mercedes V-Class executive MPV. To the average car buyer, this might not seem like an obvious move. After all, doesn't everyone want electric crossovers and SUVs over, er, a van?

We'll admit, the physical size of SUVs make them better suited to accommodating larger batteries to cope with the demands of consumers who want to enjoy impressive range. To this end, there's no shortage of electric vehicles set to join the Mercedes range over the coming years, ranging in size from a compact EQB to a range-topping super saloon, likely to be called the EQS and worthy of rivalling the Tesla Model S and aforementioned Taycan, but the EQV's arrival in the present is largely down to it being a relatively easy vehicle to manufacture due to V-Class architecture and design acting as the ideal platform for an EV.

Virtually unchanged from the Concept EQV model that was first shown earlier this year at the Geneva Motor Show, the series EQV features the face of Mercedes' electric sub-brand. A reworking of the front grille adds more black around its base to create a single design element incorporating the headlights. That front grille isn't entirely blanked off either — it still allows airflow into the 'engine' bay, where the electric motor resides. A second single grille element stretches across the lower

section of the bespoke front bumper, which is also where the battery charge port is located.

The location of the charge port proved to be a topic of debate within Mercedes, as Volker Scheinhuetten of eDrive@VANs Development explains. "To be honest, we thought about it long and hard. There's not a lot of space to play with at the rear because the sliding door goes right to the very end of the EQV's body. We also discussed positioning the charge port more centrally, where the fuel filler cap would normally be, but when an owner visits a fast-charging station, he or she would need to rely on being presented with a charge cable long enough. We also questioned whether we should put the charge point on the left side or the right side of the vehicle. After much deliberation, we decided it's better to have the connector fitted to the nearside front end."

### BOOST BUS

Owners will be able to choose how they recharge the EQV's battery. Topping it up through an 11kW AC home or destination charger will take a little under ten hours, which should be fine for overnight charging. The liquid-cooled charger can also receive rapid DC charging at 110kW, which can replenish the battery's state of charge from ten to eighty percent in under forty-five minutes. With IONITY (of which Mercedes-Benz parent company, Daimler, is a partner) announcing the imminent rollout of more rapid charging points across the European road network, continent cruising in an EV should be more manageable than ever in the months to come.

Other unique styling touches include black door mirrors and EQV badging on the wing below





**Above** It's easy to see how the EQV could become a hugely popular shuttle bus for taxi and airport transfer firms, as well as a handy recreational vehicle for big families and those who like to spend time outdoors

the front quarterlight. Stylish eighteen-inch alloy wheels present a five-spoke appearance, but are almost entirely blanked off to maximise aerodynamic efficiency. Those familiar with the V-Class will notice the fuel filler door is still there, but the panel no longer opens – a cost-cutting measure. Sliding doors on both sides provide easy access, while the tailgate lifts to reveal 1,030 litres of cargo space, depending on how you have the seating arranged. Speaking of which, the EQV can be configured in either six, seven or eight-seat layouts, although it's expected that only the eight-seat version will be offered to UK buyers.

At 41kWh and 55kWh respectively, Mercedes-Benz eVito and eSprinter vans use the same batteries as the company's plug-in hybrid passenger cars, which means the range is less than 100 miles. Mercedes reckons that such a figure for commercial use in an urban areas is sufficient to satisfy customer demand. The EQV, however, targets very different applications, hence the development of a much larger battery. "It's bigger because it's another use case," explains Tina Hezel, Mercedes-Benz EQV Product Manager. "With the eVito, we offer around ninety-three miles of range for inner-city usage, but for private and leisure use, not just in the city, but also on motorways, you need a bigger battery. With this in mind, the

battery in the EQV was developed specifically for this application."

Not only is the EQV's batter much larger, occupying most of the space between the front and rear axles, it also has a much higher capacity. It's a 100kWh unit, although Mercedes limits usable capacity to 90kWh. Still, that's the same size as what's available in the Jaguar I-Pace and more than the EQC. The battery pack is fixed to the underside of the floor and held in place with a heavy-duty frame. Minor adjustments to the suspension also help to support the weight, in addition to raising the ride height by a small amount in order to provide sufficient ground clearance.

Adopting this type of assembly brings two benefits. First, it allows for Mercedes-Benz to produce the EQV on the same production line in Vittoria, Spain, as the rest of the V-Class range. The batteries are shipped there for installation. Using this approach gives Mercedes greater flexibility in the production process and helps cater for market demand. The second benefit of mounting the EQV's battery to its floor is that there's no impact on the passenger and luggage space at the rear.

A thermal battery management system warms the battery during winter and cools it in the warm, ensuring consistent performance year-round. Officially, Mercedes says the driving range will **25**

**Facing page** EQV's charging point is on the nearside front to avoid it being hidden behind the model's large sliding doors

be approximately 252 miles and top speed will be limited to 100mph. Obviously, driving flat-out for prolonged periods will make a sizeable dent in the expected driving range. Mercedes is also planning to introduce a second EQV with a much lower top speed for inner-city use. However, as the driving range tests fail to take the impact of high speed into consideration, such a version is unlikely to offer any increase to the official driving range figures published by the manufacturer.

Energy from the battery flows to a single electric motor producing a total output of 204bhp and peak torque of 267lb0ft, effectively half of the EQC's dual-motor setup. Power is sent through a revised single-speed transmission to the front wheels. The large battery naturally has an impact on the vehicle's overall weight, even with it replacing the combustion engine and ancillary hardware that goes with it, such as exhausts, fuel tanks and the optional all-wheel-drive transmission. Mercedes spokespersons were tight-lipped on the EQV's battery weight at the vehicle's unveiling, but the gross vehicle weight has increased to no more than 3,500kg, ensuring it's permissible to drive

with a standard car licence. Oh, and as with many electric vehicles, the EQV isn't equipped to tow any kind of trailer. This decision not only helps prolong the driving range but also make life easier on the electric motor. It will still be possible to use mounting racks for bicycles on the tailgate, though. And unlike the EQC, Mercedes equips the EQV with roof rails. Nice.

Most of the internal design is as you would find it in a regular V-Class, aside from the use of different colours and materials. Across the top of the dashboard and in the door inserts is a dyed blue leather fabric to break up the swathes of black. Furthermore, there are rose gold inserts around the button panels on the centre console, similar to the interior of the EQC, and something that will become a core element of the EQ's design language.

Without the need for a rev counter, the twin-cluster instrument dial, which features a colour TFT display in the centre, displays the power usage when driving, with the needle moving from 0 to 100 percent. It then moves in the other direction to indicate the rate of charge though energy recuperation. Other specifics include small paddles





behind the wheel, allowing the driver to adjust the degree of regenerative braking force being applied. We'll have to wait until we drive the car to see just how it performs, but Mercedes says that with energy recuperation at its strongest level, one-pedal driving is perfectly possible, which should be a boon to city drivers. A coasting or sail mode will also be available for cruising at higher speeds.

## DIGITAL DELIGHTS

An ECO Assistant operates automatically to help drivers achieve the best possible battery performance over a journey. By using numerous data points ranging from navigation information to road traffic sign recognition, and information gathered from radar and camera systems, ECO Assistant can automatically adjust the rates of energy recuperation. The navigation software can optimise journeys to include known charging stations and, if one is missed, it can adjust the trip and driving mode to boost range.

The ten-inch display runs the latest MBUX infotainment system, including the 'Hey Mercedes' voice-activated virtual assistant. Composing text messages, choosing what songs to play or finding out what the weather is like at your next destination can all be done without touching the display. Remote access through the 'Mercedes me' smartphone app lets users plan journeys and send their destination to the EQV before getting into the driving seat. The ability to see the vehicle's state of charge and pre-setting the cabin temperature can also be accessed through the app.

Those with expectations of a battery-powered version of the Marco Polo camper will have to remain patient, as no such plans have yet to materialise. When quizzed about the possibility of a fully electric Marco Polo, Mercedes representatives weren't dismissing the idea outright, but did point out the hurdles in its place,

**Facing page** EQV offers plenty of space, although an extra row of seats is expected to be fitted to examples arriving in the UK

stating: "In theory, maybe. Technically it would be possible because it's the same chassis and battery frame. That said, the Marco Polo is a heavy vehicle. Coupled with a heavy battery, we might face production and operational restrictions, but this is definitely something for us to look at in the future. We're always examining at the market, evaluating and thinking about new Mercedes product development. For now, however, we're focusing all our attention on the EQV."

The prospect of an electric Marco Polo is an intriguing one, though using the current standard of batteries would be unlikely to provide the sufficient driving range users expect. Perhaps Mercedes will wait until it can successfully adapt its hydrogen fuel cell technology? For now, there's a far greater likelihood that the EQV will fast become an irresistible draw for taxi rank dwellers, private hire companies and upmarket hotels, all keen to offset their carbon emissions and appear environmentally aware. When pressed for sales projections of the EQV, Mercedes spokespeople declined to talk specific numbers or to guess what the split between commercial and private buyers is likely to be, but with Mercedes-Benz UK rumoured to only be interested in import eight-seat EQVs, it seems clear the commercial market is going to be key to the model's success.

The EQV might not be the most exciting of EQ models set to arrive over the coming years, but it could go on to be a popular Mercedes, especially if governments continue to introduce zero-emission driving zones in the world's cities. Electric SUVs may become the more popular choice for families over the next few years, especially if prices begin to fall, but it's far more likely that, in the near future, you could find yourself being driven around a city or enjoy an airport transfer in near silence from within the confines of an EQV. Time will tell!

**Top** Range is good for steady speed over long distance, with an EQV optimised for inner city driving expected to land soon



# 2019 FESTIVAL OF SPEED

Celebrating 125 years of success in motorsport, our favourite manufacturer fielded a magnificent display of important sports machines at the world-famous Goodwood gathering...

WORDS Robert Smith PHOTOGRAPHY Mercedes-Benz



**F**rom its very beginnings, Mercedes has been a dominant force in motorsport. Win after win in endurance racing, touring car, Grand Prix and a host of other high-octane disciplines have helped to bring about significant technological development that has trickled down from race circuit to road, and not just benefiting cars wearing the three-pointed star.

Little wonder, then, that the manufacturer was keen to blow its own trumpet at the recent Goodwood Festival of Speed. Current Mercedes-AMG Formula One driver, Valtteri Bottas, and reserve driver, Estaban Ocon, were on hand for a display of tyre shredding, but the real stars of the show were the magnificent assortment of



**Facing page** 1903 60HP leads the charge of magnificent Mercedes motorsport machines charting success from the earliest days of automotive design and development





**Above and left** A truly remarkable array of title and race-winning Mercedes-powered cars stunned Festival of Speed attendees

fast four-wheelers lined up ready for a blast along Goodwood's famous hill climb. A 300 SLR, W125, W165, W196, Sauber C11 and a W201 190E 2.5-16 Evolution II Zakspeed DTM tin-top were just some of the highlights, with the Duke of Richmond spotted enjoying seat time behind the wheel of our favourite brand's offerings.

Elsewhere on site, a special exhibition charted all 125 years of Mercedes motorsport history, starting with the 1894 Paris to Rouen road rally, a competition organised by *Le Petit Journal*, a Parisien daily newspaper. Not strictly a race, the event was designed to test the viability of "the horseless carriage" as a form of transport. Rather than speed, participating vehicles would be judged on whether they were "easy to operate for the competitors without any danger, and to explore the financial expense of operation."

The judges singled out Gottlieb Daimler's winning engine for special praise, saying it "turned petroleum into a practical solution" for powering automobiles. It was the start of a 125-year story of success, both on and off the track, and one celebrated in style at Goodwood.



## PROJECT

# END OF THE ROAD

The *Mercedes Driver* 190E has performed well as a workhorse, but the car is suffering from one too many wrongs to make a right...

WORDS & PHOTOGRAPHY **Dan Furr**

If you've read the introduction to this issue of *Mercedes Driver*, then it'll come as no surprise for you to learn this is the last of our W201 190E 2.6 project updates. Truth be told, other than servicing and piling on miles, there hasn't been a huge amount of work taking place, primarily because until we could establish exactly what was wrong with the car (a lot), there was a reluctance to shell out for parts if the outcome of our investigation was, as some of you correctly predicted, that the cost of remedial work would drastically outweigh the financial value of the car.

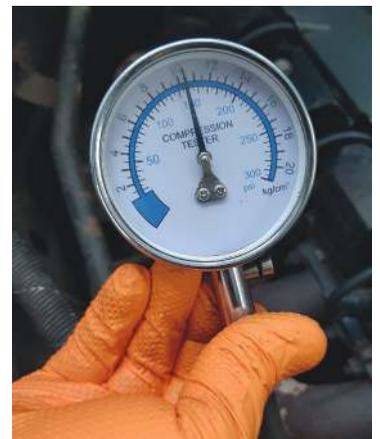
I'd already given it a once-over and concluded there was much in need of urgent attention, but an independent inspection at Huntingdon-based servicing and maintenance specialist, SOS Automotive ([sos-automotive.com](http://sos-automotive.com)), confirmed my suspicion, as well as highlighting a host of other serious complaints. Chief among the listed concerns was the heavy oil

leak emanating from the back of the cylinder head, a fault which had the potential to send us down the proverbial rabbit hole.

### **PENNY WISE**

After much deliberation, and after the car was mistakenly recognised as "once belonging to the Prince of Wales" by one of SOS Automotive's customers, we decided our Baby Benz was too far gone to warrant serious expenditure. Considering the impressive cosmetic condition of the bodywork, we didn't take the decision lightly, but with engine complaints, cooling issues (including a leaking radiator), a busted heater matrix, failing suspension, brakes in need of overhaul, an exhaust system with more holes in it than Swiss cheese, a cracked rear exhaust manifold, irregular-profile tyres and the prospect of sky high labour charges, the project was deemed financially unviable.

**Facing page** The Blue-Black Baby Benz performed the role of camera support vehicle brilliantly, enabling tracking shots for recent *Mercedes Driver* and *GT Porsche* magazine features to be realised



So, been there, done that, bought the t-shirt, eh? Well, as it happens, yes. I literally bought the t-shirt. A pleasing souvenir from my time with the car, which performed brilliantly as a camera support vehicle on numerous *Mercedes Driver* and *GT Porsche* magazine photo shoots, making the decision to dismiss the Blue-Black four-door even more disappointing. Once warmed up and in Sport mode (Economy mode pulls away in second, promoting the idea of the 2.6-litre lump being gutless), the car drove brilliantly, but knowing just how many parts need to be renewed, not to mention that horrendous oil leak, there was always the sense of being in charge of a ticking time bomb.

The car is now back with the rest of the *Mercedes Driver* publisher's fleet. If you're interested in taking on the project, which may be viable if you're carrying out the work as a labour of love, then don't hesitate to drop me a line at [dan.furr@kelsey.co.uk](mailto:dan.furr@kelsey.co.uk). Who knows? Perhaps this won't be the last we see of K192 VBD?! 📷

# FORMULA FOR SUCCESS

The Mercedes SLR McLaren married motorsport expertise with manufacturer heritage to create a supersonic sports star..

WORDS **Richard Gooding** PHOTOGRAPHY **Various**







**T**he old adage of ‘win on Sunday, sell on Monday’ has spawned some of the best-loved race-inspired road machines, and with a heritage as rich as that of Mercedes, there are almost endless opportunities to plunder the past. The 1930s Silver Arrows helped to lay the manufacturer’s motorsport foundations, but the shapely profile of the 300 SL (see page 36) make it Sindelfingen’s shining star. It’s little wonder the car continues to inspire the bods at Benz; the W194 300 SL endurance racer enjoyed remarkable competition success in the 1950s and previewed the classic W198 300 SL road car. Even so, the W196S 300 SLR is, perhaps, more of a sports superstar. Best remembered for Sir Stirling Moss’s 1955 Mille Miglia win, as well as victories at the Targa Florio and Tourist Trophy, the rapid racing machine was designed by Gullwing master, Rudolf Uhlenhaut, but bore no relation to the W194 or W198. Derived from the W196 Formula One race car, the W196S’s legacy entered a new phase with the unveiling of the 1999 Vision SLR concept.

The pointy-nose coupe marked the arrival of a new super-GT wearing the three-pointed star. Referencing the single pair of Uhlenbault-built 300 SLR coupes and showcasing Formula One technology, the sensational concept lived up to its insightful name. Mercedes drew on its racing heritage and its relationship with the McLaren racing team, a partnership which resulted in the 1998 drivers’ and constructors’ F1 titles. In other words, at the time of the Vision SLR’s reveal, Team

McLaren-Mercedes had reached the absolute pinnacle of world motorsport.

A clear salvo that the Vision SLR was heading for production came in the shape of a roadster variant a few months later. Powered by a supercharged five-litre AMG V8, the open-top SLR concept was a super-glamorous 557bhp bruiser. Reaction to the model was screamingly positive, but in keeping with the idea that all good things come to those who wait, it took a full five years for the series SLR to land! Mercedes levered connections with its Formula One partner to build the new road racer and, in 2004, the Mercedes-Benz SLR McLaren was finally unveiled.

## FUTURE VISION

Introduced as a “Gran Turismo for the twenty-first century” and given factory designation C199, the new arrival was every inch a high-tech supercar. Constructed almost entirely from carbon-fibre composite as means of keeping weight at a minimum, the SLR tipped the scales at 1,768kg. Carbon-fibre construction aided safety, too, and a pair of 620mm crossmembers were designed to absorb the full energy of a frontal collision, upholding our favourite manufacturer’s reputation for producing supremely safe vehicles. The first production car to boast a frontal crash structure made entirely from carbon-fibre, individual components were bonded and riveted to the chassis and bodyshell, with careful calculations ensuring a structurally superior passenger cell. Built by McLaren Automotive at its Portsmouth and Woking facilities, F1 safety expertise ensured the new

**Above** The Mercedes SLR McLaren in the company of the cars which inspired its construction with F1 tech

**Facing page** Sir Stirling Moss and his navigator, Denis ‘Jenks’ Jenkinson, rolling off the starting ramp in the 300 SLR at the 1955 Mille Miglia endurance race

## SLR MCLAREN MERCEDES DRIVER



SLR offered the extensive occupant protection.

Motorsport know-how also punctuated the Stuttgart speed machine's looks. Little changed from the Vision SLR concept, with the front mid-engined, rear-wheel drive configuration giving the lines of Daimler's Chief Design Officer, Gordon Wagener, a classic long bonnet coupled with a rear-cab GT stance. Marrying modernity and tradition, the arrow-shaped nose and twin-fin front spoiler echoed an F1 car's front blade and hinted at the circuit-derived technology within. The 'swing wing' butterfly doors recalled the gull-wings of the 300 SL, the side 'gills' and exhausts nodded to the 300 SLR and the double-headlamp face was a familiar part of Mercedes-Benz 1990s design language. The low-slung looks decreed little doubt this new SLR was built for speed. Its performance didn't disappoint.

Firmly putting the 'super' into supercar, the new mighty Merc was even more powerful than the concept which inspired it. The supercharged 5.5-litre engine was the first eight-cylinder unit to be fully developed by AMG. Featuring cylinders banked at ninety degrees, a five-bearing crankshaft and a screw-type supercharger with Teflon-coated rotors, power was prodigious 617bhp. Maximum torque of 575lb-ft (a whopping 780Nm) was available from 3,250rpm. A fearsome flier, the dash to 62mph from rest was completed in 3.8 seconds and top whack was 207mph. Optimised for high torque output, the five-speed AMG Speedshift R transmission featured Manual, Comfort and Sport programmes, though another trio of selections — Sport, Supersport and Race, all activated while in Manual mode — allowed for shorter and snappier shifting.

The brakes and chassis were the final pieces of the [▶](#)





## Formula won

Mercedes withdrew from motorsport following the 1955 Le Mans disaster, only returning to F1 in 1995 with the McLaren-Mercedes partnership. The team won the constructors' title in 1998, with Mika Hakkinen taking drivers' spoils in both 1998 and 1999. McLaren was established by its founder, Bruce McLaren, in the 1960s and has called upon Ford, Honda, Lamborghini, Peugeot, Porsche and Renault, as well as Mercedes, for engine technologies. In 2010, the Mercedes name once again reigned supreme in F1 after Daimler bought a 45.1% stake in Brawn GP. In the present, Mercedes-AMG Petronas is only the second team to clinch five consecutive F1 constructors' titles.

SLR's F1-inherited jigsaw. A Sensonic Brake Control system took charge of 370mm (front) and 360mm (rear) carbon-ceramic discs, which were fade resistant up to a massive 1,000°C, but the SLR's ultimate party piece was its integral rear air flap, automatically elevating to a ten-degree angle to increase downforce when 59mph was reached. A manual switch allowed for a thirty-degree angle when those carbon stoppers weren't man enough! Eighteen-inch alloys were steamroller-wide 11.5 inches at the rear, with buyers given the option of turbine-styled nineteen-inchers. An exceptional and stunning work of automotive sculpture, the SLR's astounding engineering wowed as much as its thunderous performance.

The covers were pulled off the R199 SLR McLaren Roadster at the 2007 Goodwood Festival of Speed. Packing the same 617bhp and 207mph as the coupe, the model's open-topped style evoked a direct comparison with the race-winning 300 SLR from the 1950s. The R199's engineering, however, was even more impressive than its tin-topped sibling, with in-car conversations still perfectly audible past the 125mph mark! The supplied canvas roof was available in three colours and could be opened and closed semi-automatically in ten seconds, but still needed to be latched to the windscreen frame.

As with the coupe, safety was high on the agenda. Adaptive airbags were fitted throughout the cockpit, with twin fixed rollover hoops and a reinforced windscreen frame adding more protection. Occupants also revelled in the same high-end equipment found in the closed-roof SLR. Semi-aniline leather-trimmed carbon-fibre bucket seats, dual-zone air-conditioning

and a premium BOSE sound system were part of the comprehensive specification, along with a multifunction steering wheel, gearshift paddles and an impressive-for-the-time satellite navigation.

If the Mercedes SLR McLaren wasn't special enough, limited editions of the super sports car offered even more exclusivity. Developed by McLaren, the 722 Edition of 2006 blatantly referenced the aforementioned Miglia-winning 300 SLR of 1955, as evidenced by the newer car's name; 722 was the vintage motorsport machine's allocated racing number, awarded in accordance with the time (07:22) Moss and his navigator, Denis 'Jenks' Jenkinson, rolled off the race's starting ramp. The McLaren's Crystal Antimon Grey paintwork contrasted with red 722 badges, while Palladium Grey nineteen-inch alloys and tinted lights added even more style. A dropped ride height, an updated front air dam and a racier rear diffuser also gave the game away.

## PEAK PERFORMANCE

Revisions to the V8 saw the 722 Edition produce 641bhp and scorch to 62mph 0.2 seconds sooner than its 'standard' SLR stablemate. With 390mm anchors, the 722 stopped better, too. Removal of the CD changer and in-car telephone helped to shave off 44kg, pushing top speed to 209mph. And if the 722's stiffer suspension delivered a slightly rougher ride, the presence of an Alcantara and carbon-fibre lined cabin somewhat softened the blow.

At 3.1 seconds to 62mph, the 722 S Roadster was even speedier than the hard-top. The 722 GT was developed in partnership with racing specialist, Ray

**Facing page** The Mercedes SLR McLaren 722 GT, a limited edition RML-configured racing machine built specifically for a one-make global racing series

Mallock Limited (RML), in 2007 in readiness for the SLR Club one-make series. The RML-tweaked track terrorist featured more than four-hundred redesigned parts and produced 671bhp, with further weight reductions coming from polycarbonate windows and OZ racing rims. Wider wheel arches and a pneumatic jack system were also features of the GT, a model built just twenty-one times and seen hammering around some of the world's best-loved racing circuits.

Launched by McLaren Special Operations (MSO) for existing SLR owners, the SLR McLaren Edition package included revisions to the host SLR's bodywork, a titanium sports exhaust and upgraded steering and suspension equipment. Only twenty-five SLRs enjoyed the MSO transformation, each owner treated to specification unique to his or her individual vehicle. Priced at an eye-watering £150k, the option wasn't cheap, but if you could afford to buy an SLR, you could probably afford to personalise it through MSO!

At the outset, Mercedes and McLaren stated just 3,500 SLRs would be built. In the end, only 2,157 were assembled. An expensive world championship-inspired hero car, the SLR McLaren was the fruit of a successful motorsport marriage which went on to influence the Mercedes road cars of today. The SLS AMG and AMG GT may have followed in the SLR's tyre tracks, but the C199 and its drop-top counterpart remain more daringly styled and more powerful creations. Proof, if proof be needed, that heritage and competition unions can lend Mercedes road cars a persuasive pedigree! 

**Left and below** Sketches and the final incarnation of the Speedster-styled SLR McLaren Stirling Moss, limited to seventy-five cars and only available to existing SLR owners at a cost of \$1million





# GREAT PRETENDER

Built in its master's shed, this 335bhp Sauber C9 evocation has been constructed using components from the Mercedes parts bin...

**WORDS & PHOTOGRAPHY Sudhir Matai**



Johan Ackermann's blood has its own octane rating. As if to prove the point, during his colourful career as a mechanic and test driver for BMW and BMW Motorsport, he developed and built not one, but three cars with his bare hands.

It helps, of course, that he trained as an aircraft technician. That's already a long list of accomplishments and we're only two sentences into this *Mercedes Driver* article, but don't go thinking we're singing Johan's praises because he's showing signs of slowing down. On the contrary, he's as enthusiastic about custom cars now as he ever was, although it's arguably the talented craftsman's first build that brought him the highest amount of attention in his native South Africa.

As you can probably guess, the former BMW boy is a motorsport enthusiast through and through. A burning desire to race led him to satiate his desires in the world of gaming. More specifically, he poured seemingly endless hours into the *Gran Turismo* franchise on his Playstation. It was here that he became besotted by a virtual representation of the Sauber C9, the famous Group C racer that helped Mercedes secure victory at the 24 Hours of Le Mans in 1989.

"I've been playing *Gran Turismo* since its launch on the first Playstation!" laughs Johan. "I love navigating my way through virtual representations of the Nürburgring. One day, I read a story about a guy from Germany who was trying to find the fastest player around the famous video game's take on the Green Hell. I selected the C9 and configured in-game settings to ensure the car would deliver a quick lap. After weeks of trying, I eventually set a time quicker than anybody else participating in

the competition." In fact, he was a full five seconds faster than his nearest rival. "I was supremely happy with the result, which acted as the catalyst for a train of thought that had me hankering for a drive of a C9 in the real world. Moreover, I wanted to drive a Sauber on the road!"

### GROUP EFFORT

Getting your hands on any Group C racer is something of a challenge, not to mention prohibitively expensive for anyone but the most well-heeled of motorsport bods. *Building* a Le Mans-style racer is equally challenging, especially for anyone not in charge of their own race team. Fortunately, Johan's wealth of experience in the field of competition cars meant he was already a few rungs up the ladder when it came to realising his dream. "I took a 1:32 scale model of the C9 and figured that if I scaled its dimensions accurately enough, I'd have a decent starting point when it came to creating a faithful C9 replica." Johan makes it sound terribly easy, but the job was anything but. Nevertheless, armed with a basic plan of action, he visited the owners of his local Mercedes-Benz parts retailer, CJ Auto, with a list of the required hardware. It was time to get stuck in.

"They thought I was crazy," Johan laughs. "Fortunately, they were able to help with every genuine Mercedes part I needed. I started with the basics, namely the front and rear suspension, engine subframe and wheelbase measurements. Using these as my launchpad, I constructed a tubular steel chassis, which, in truth, wasn't too difficult. The length of the car I ended up with is the same as a C9, but the width is slightly narrower. The hard work, however, was yet to come."



**Above** Imagine pulling up behind this as you approach the next set of traffic lights

**Left** M112 3.2-litre V6 is loaded with twin turbochargers and produces a reliable 335bhp

**Facing page** Carefully crafted bodywork was a labour of love carried out by Johan in his shed

**Final page** Johan and his assistant, Christo, posing next to their custom creation



With the overall dimensions of his custom creation finalised, he had the unenviable task of replicating the exterior body shape of Sauber's low-slung racer. He began by fabricating a metal skeleton from 3mm flat iron. "I bent and shaped those bars to get the simple frame," he explains. "When the work was finished, I filled the gaps with 4mm cardboard zip-tied to the framework. I followed up with sheets of fibreglass on both sides, effectively creating a sandwich. This was when the body really started to take shape."

The next challenge he faced was the creation of the rounded roof ("you can't do it with flat sheets"). A smooth papier-mâché mix was produced and moulded until Johan was satisfied. Then, he laid fibreglass over the solidified paper to complete his basic body shape.

### LIMITED RESOURCES

Much smoothing followed, until the finished fibreglass body was ready to be coated in a lick of signature Mercedes race car silver. All told, fabrication took the best part of eighteen months, but don't be fooled into thinking Johan was working in a high-end motorsport garage. No, the toil was carried out in his shed at home, which makes the finished car even more jaw-dropping.

With the bodywork complete, it was time to 22

get cracking with the mechanicals. Suspension is courtesy of racing-spec double wishbones front and rear. Eibach springs and Bilstein dampers are responsible for dealing with road irregularities, while the wheels came off an S600 (they've since been treated to a carbon-fibre finish). Slowing the car swiftly are the same S600's multi-piston brake calipers, while the rear anchors were liberated from a donor W124 E320.

## DOUBLE BOOST

Johan decided to mid-mount a W203 M112 3.2-litre V6 instead of following the factory C9 specification of an M119 V8. Deploying a more compact motor allowed a little freedom in terms of packaging. Twin Garrett turbochargers accompanied by external wastegates were promptly bolted to the six-shooter. The engine was then mated to a W203 five-speed manual transmission coupled directly to the differential. Yep, there's no propshaft.

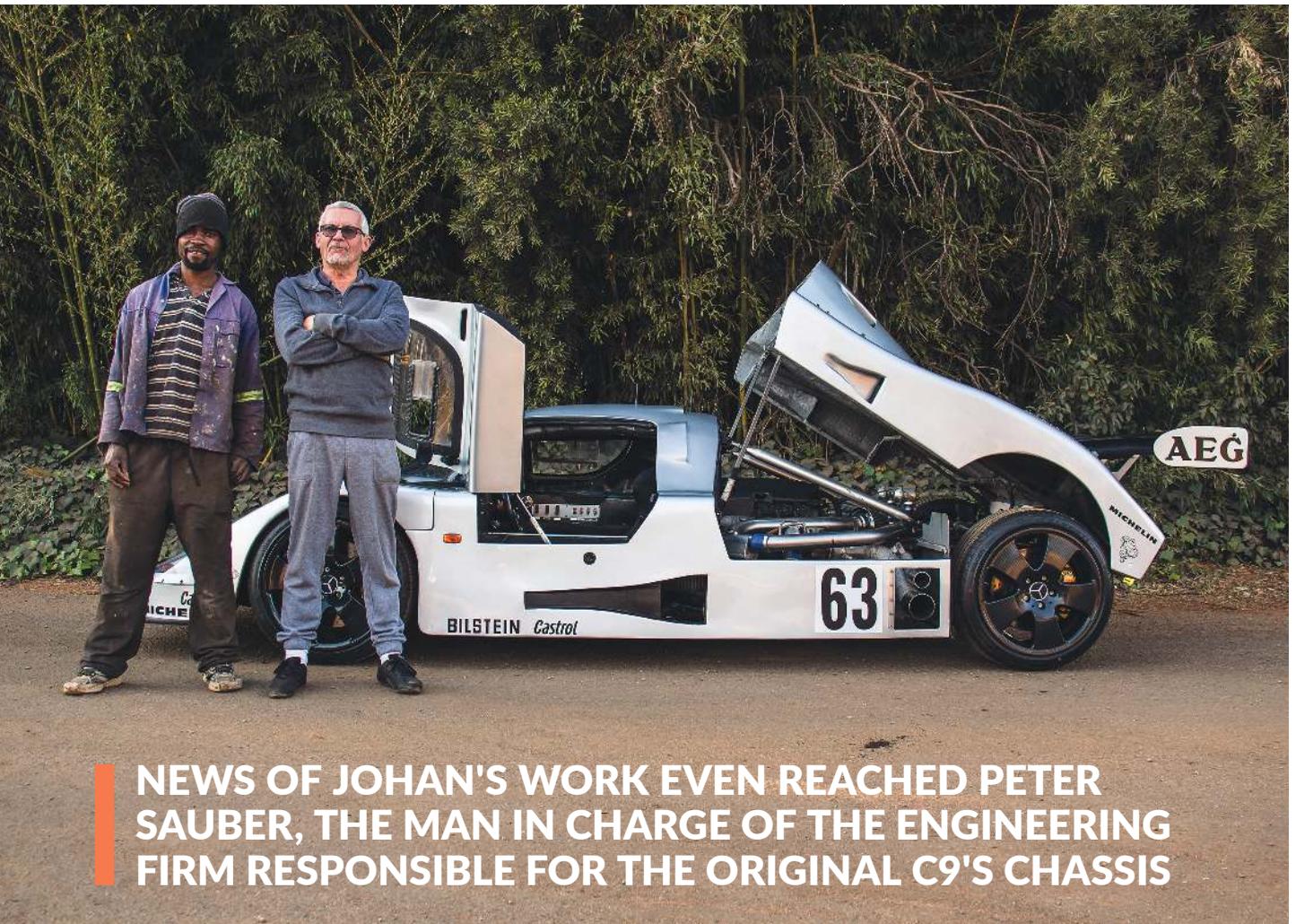
Using Spitronics standalone fuel management, the modified motor has been dyno-tuned to more than 335bhp. With a mass of little more than 1,060kg to lug (not considerably more than the genuine C9), this sensational tribute has brisk – rather than

## Final fantasy

A development of the Sauber C8, the C9 struggled to find its feet during its debut season in the 1987 World Sportscar Championship, finishing twelfth overall, scoring points in only one round of the competition. For 1988, full factory support helped the C9 to reach second in the series behind the Jaguar XJR-9, an achievement made possible thanks to five race wins. In 1989, the C9 achieved huge success thanks to the M117 V8 turbo making way for the M119. The C9 won all but one race of the season, including the 24 Hours of Le Mans. The C11 replaced the C9 for 1990's campaign.

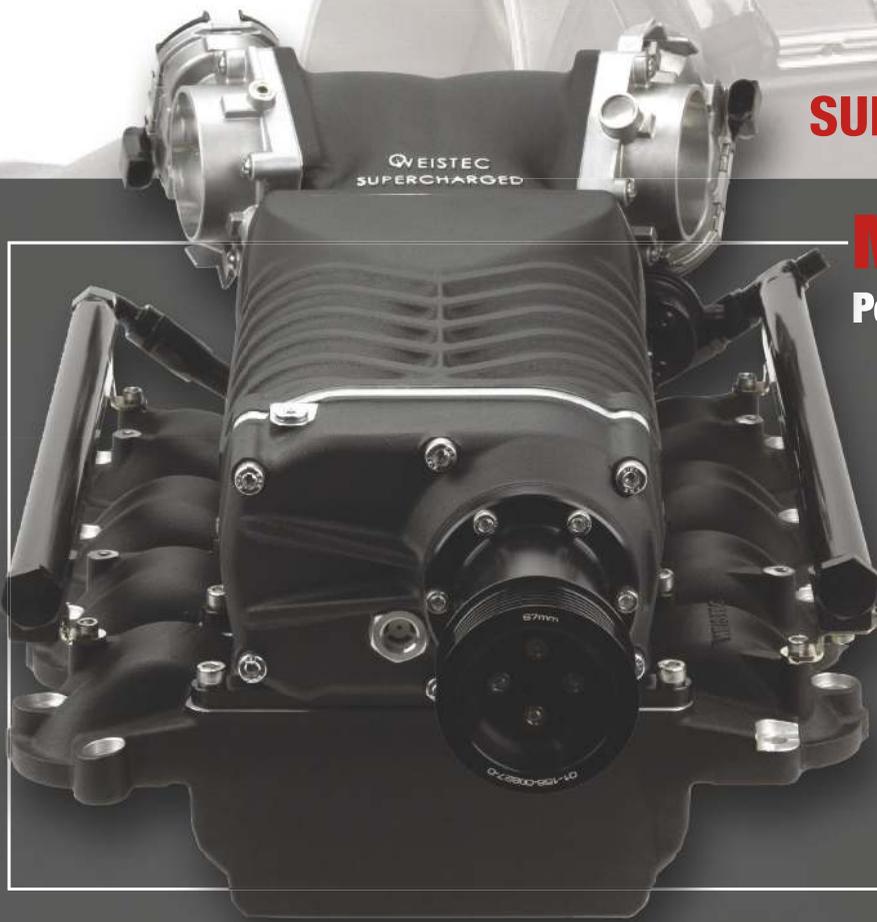
neck-snapping – performance. Johan faced just one final hurdle: to see the car successfully registered for the road, a task he managed to complete at the close of the project a couple of years ago. Since then, he's covered more than 8,000 miles in his special C9 evocation. Indeed, so well-known is the car throughout South Africa's classic and modified car community, news of Johan's work even reached Peter Sauber, the man in charge of the engineering firm responsible for the original C9's chassis! Impressed by what he'd heard about, the Swiss motorsport executive wrote to the keen DIYer wishing him every happiness behind the wheel of his extraordinary build.

At the time of writing, Johan is currently finalising the sale of his custom car to its new owner. "I achieved what I set out to do with the project. It's time for someone else to enjoy this labour of love as much as I have," he tells us, philosophically. Now retired and looking forward to his next major build, he lets slip what he has in mind. "A replica of the BMW V12 LMR known for winning the 1999 24 Hours of Le Mans," he grins. If it's anywhere close to being as good as his homebuild Sauber C9, we can't wait to see the result of his efforts.



**NEWS OF JOHAN'S WORK EVEN REACHED PETER SAUBER, THE MAN IN CHARGE OF THE ENGINEERING FIRM RESPONSIBLE FOR THE ORIGINAL C9'S CHASSIS**

# MERCEDES-BENZ



## M156 STAGE 3 SUPERCHARGER SYSTEM

### Mercedes-Benz Performance Improvements

POWER GAIN  
Up to **+289 HP**

TORQUE GAIN  
Up to **+187 TQ**



| YEAR        | MAKE          | MODEL     | TRIM |
|-------------|---------------|-----------|------|
| 2008 - 2011 | MERCEDES-BENZ | SL63 AMG  | R230 |
| 2007        | MERCEDES-BENZ | R63 AMG   | W251 |
| 2007 - 2011 | MERCEDES-BENZ | ML63 AMG  | W164 |
| 2007 - 2010 | MERCEDES-BENZ | CLS63 AMG | W219 |
| 2007 - 2010 | MERCEDES-BENZ | CL63 AMG  | W216 |

| YEAR        | MAKE          | MODEL     | TRIM |
|-------------|---------------|-----------|------|
| 2007 - 2010 | MERCEDES-BENZ | CLK63 AMG | W209 |
| 2007 - 2010 | MERCEDES-BENZ | S63 AMG   | W221 |
| 2007 - 2011 | MERCEDES-BENZ | E63 AMG   | W212 |
| 2008 - 2014 | MERCEDES-BENZ | C63 AMG   | W204 |

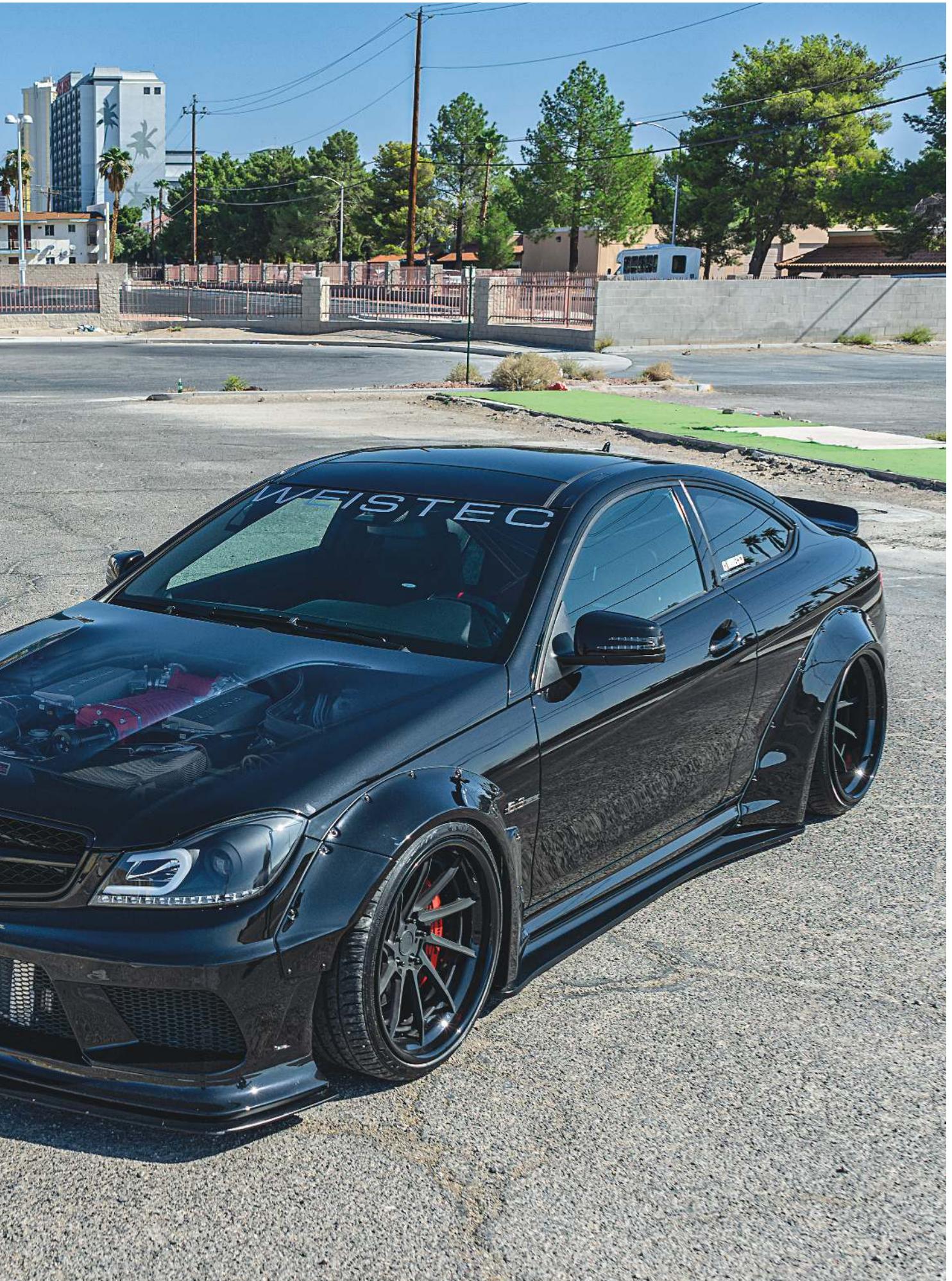
See our website for more info

A photograph of the MGM Grand building in Las Vegas. The building is a large, multi-story structure with a blue facade and white accents. A sign on the building reads "MGM GRAND" and "ALTER YOUR REALITY DAVID COPPERFIELD". Another sign on the building reads "MGM" and "CAMELO 666 2". In the foreground, a dark blue Mercedes-AMG C63 is parked on a paved area. The car's front end, including the grille and headlights, is visible. The background shows a parking lot with several cars and a fence. The sky is clear and blue.

# WALK ON THE WILD SIDE

Style matters every bit as much as speed. Just ask the owner of this wide-bodied, neck-snapping 750bhp C63 AMG...

WORDS Emma Woodcock PHOTOGRAPHY Dan Sherwood



**F**ront and rear, left and right. It doesn't matter which corner of this C204 C63 AMG coupe slams into your psyche first. The main focus is always the same: extended wheel arches jutting far away from the body shell, following a line that's just a few precious degrees from horizontal. Attached to the original Mercedes metalwork with dozens of exposed bolts, the kit eschews subtlety in favour of vivid, industrial obviousness. It's the work of Japanese superstars, Liberty Walk, and, no matter your personal tastes, it demands your attention.

Look a little longer and there's cohesion mixed into the cartoonish proportions. The arches might start halfway up the body, jumping out from the front and rear bumpers, but they gain a longer, shallower curve as they slide towards the sills and fall into a kinked side skirt. The same gloss black strip rings the car, tying the style together as it grazes up against the exhaust pipes and pulls to an arrowpoint under the front apron. Just above, the bumper itself takes Mercedes' own trapezoidal, three-part shape and adds depth, the houndstooth grilles falling all the way to the floor. A simple, pronounced flick of rear spoiler completes the transformation. Owner, Nielson Ballon, knows how to make an entrance.

Rolling through the streets of California, this C63 is a custom build which goes all the way down to the ground. Air Lift Performance air bags sit at all four corners, replacing the original suspension with height adjustable double-bellow air springs which can drop the car up to 95mm lower than standard. "I wanted an aggressive stance, even though Los Angeles streets aren't friendly," Nielson explains.

"Having the option to adjust the suspension is the perfect solution."

The frame-laying ride height forces focus onto the Savini alloys, another showstopping part of the build. "I've always been a huge fan of the brand," says Nielson, "and to be able to partner with them is just the icing on the cake." Sometimes, his C63 runs a set of black SV83 Xtreme Concave multi-piece wheels with a polished rim. On other occasions, it rolls on the curving, directional sweeps of all-black cast BM15s. Both position the AMG far from stock and look all the better for it.

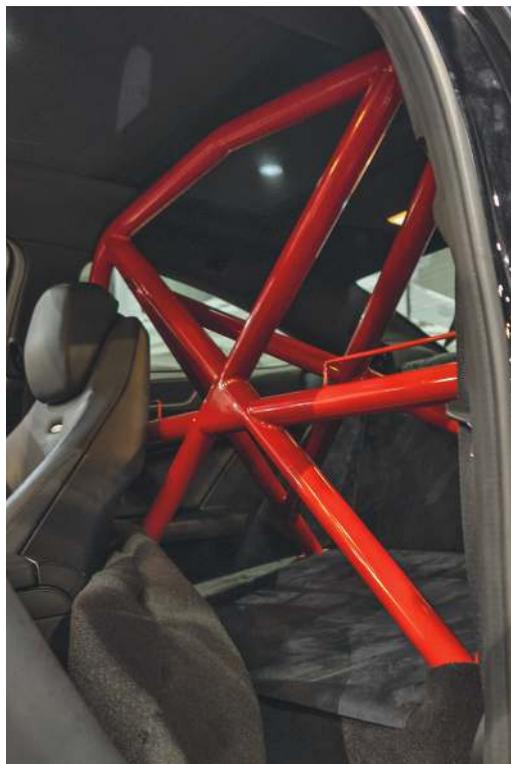
### FRENCH FANCY

Peer inside and the transformation continues. Leather and electrical adjustment might characterise the standard C63 cabin, but Nielson has created a more extreme interpretation. The rear bench has vanished, and the original front chairs are absent too, replaced by a pair of hide-covered Recaro Sportster CS seats. Boasting deep side bolsters and a single-piece rear shell, they're the same track-ready items RenaultSport has long favoured for its fastest hot hatches. A customised RevoTech Motorsports steering wheel echoes the same aggression, glimmering with high gloss carbon-fibre sections covering the base, top, spokes and gearshift paddles. Flashes of bright red counterpoint the motorsport material, tying the stitching and straight ahead into the car's twin-tone colour scheme.

The same shade also throngs behind the passengers, thanks to a half roll cage. "It's all in the details," Nielson explains. "That's what I hear over and over again, and it's little changes like this which make my C63 stand out." The four-



**Above** Unmistakably Liberty Walk, the body kit gives Nielson's already impressive C63 plenty more road presence



**Left** Open the bonnet and the Weistec supercharger makes itself known through a striking red finish at the heart of this special AMG's engine bay





point construction comes courtesy of Studio RSR, a Los Angeles specialist best known for the hot pink exoskeleton it recently fabricated for a Lamborghini Huracan. Bolted to the chassis via six custom brackets, the AMG cage is far less controversial, but just as purposeful. Even a Black Series can't measure up.

## THE LOW LIFE

Don't let us give the wrong impression: the interior isn't just an exercise in sports car asceticism. The centre console wears an Air Lift Performance 3H controller, a wired-in device which allows Nielson to control the air suspension's height and pressure at all four corners without leaving the driver's seat, but the real action is concealed in the boot. Built from Diamond Audio components, the stereo system is a custom AI & Ed's Autosound construction which brings the noise and struts with simple, distinctive style. Clear LEDs pick out the main attractions, while an angular cut out, complete with a custom three-point star, gives admirers a window on a pair of upright speakers. And all this in a luggage compartment that's still carpeted and accessible.

Pop the bonnet and it's clear this C63 is a long way from Mercedes' mechanical specification, too. Where the factory favoured natural aspiration

for the W204-generation AMG, quite reasonably reasoning that a basic 451bhp, optional 481bhp and a range peak of 513bhp were enough to grant the C-Class a wild side, Nielson is hungry for more. Eschewing the twin turbochargers that now appear throughout the AMG range, he's opted instead for a 2.3-litre supercharger.

Though both devices operate on the same basic principle – air goes in, air is forced above atmospheric pressure, power levels rise – turbochargers and superchargers diverge wildly in practice. While turbos are spun up to operational speed by exhaust gases, creating a small but sometimes detectable lag between driver demand and power delivery, superchargers run straight off the engine crankshaft. There's a slight power cost – a supercharger requires some of the motor's output to run – but the result is instant, any revs boost. Once the preferred forced induction method for AMG models, appearing in a range of noughties models thanks to the thundering, 5.4 litre M113K engine, superchargers are still a popular tuning choice for big power Mercedes builds. Nielson is in very good company.

The power adder in Nielson's C63 isn't just any supercharger: it's a Stage 2 item from globally renowned, California based specialists Weistec Engineering. A twin-screw construction, the

DRIVER

Q&A



### NIELSON BALLON

**First Mercedes**  
This one

**Favourite Mercedes**  
Believe it or not, a customised Sprinter van

**Best thing about your C204 C63 AMG**  
It's one of a kind

**Worst thing about your C204 C63 AMG**  
Terribly bumpy LA streets pose a challenge



blower uses a pair of grooved, meshed lobes to compress air and raise power. Benefiting from a cast aluminium throttle body and lower manifold and billet idlers, the Weistec device is a heavy-duty unit supported by a high-flow fuel rail, a 45mm bypass valve and a liquid-to-air intercooler which is rated to 1000bhp. “Put the pedal to the floor and you get pushed back into your seat and hold on for a wild ride,” Nielson laughs. The numbers tell their own story: 750 horsepower and 700lb-ft of torque.

## PUMP UP THE VOLUME

Power isn't the only defining feature of the C63's M156 V8: all variants of the 6,208cc unit are also renowned for their barbed, ululating exhaust note. Shouting from four squat pipes, it's a violent noise which made the C63 AMG an audio icon straight from the factory, but a full Frequency Intelligent exhaust helps Nielson's car to go further still. Complete with ceramic-coated manifolds, a serpentine crosspipe and 55mm finishers with vivid Titan Blue detailing, the system has the visuals to impress and more than enough sound to match. That doesn't mean the Frequency Intelligent pipes are

## Walk of life

Liberty Walk body kits didn't burst onto the tuning scene until 2009. Before then, founder, Wataru Kato, kept his focus within Japanese borders and slowly created a reputation for extreme additions to local Lamborghinis. Things changed when one of those cars made it to SEMA. The number of Liberty Walk cars in foreign markets now massively outstrips those within Japan, while the wide, bolted-on wheel arches which define the company look have been applied to everything from powerful Ferraris to the Toyota Prius.

always bashing ears, mind. Thanks to electronically controlled valves which can open on demand or at a pre-configured rpm threshold, this exhaust hides blends low revs subtlety with hard use theatrics.

Wherever Nielson goes, the AMG puts on a show – something the build has proven with two appearances at Las Vegas tuning extravaganza, SEMA. “I surrendered my car for the whole six weeks before the 2017 show,” he tells us. “SEMA was my own personal reveal, too. And Long Tran's work speaks for itself!” Founder of LTMotorWerks and sole US distributor of Liberty Walk body kits, Tran has been a pivotal figure in ensuring Nielson's C63 is finished to the highest standard.

With over 18,000 Instagram followers and a seemingly endless stream of videos and photos online, this brilliant black C63 is never short of attention in the real world, either. “It's so rewarding being able to own one of just two Liberty Walk C63 AMGs in the USA,” Nielson smiles. “The car gets greeted with a warm welcome everywhere it goes. I really enjoy seeing how it's viewed through other people's eyes.” We'll tell you one thing, Nielson. We can't stop staring. 





## UNDER THE HAMMER

# HAMMER TIME!

Despite a slowing classic car market, fun in the summer sun helped to secure strong sales for Mercedes metal at recent auctions...

WORDS **Dan Furr** PHOTOGRAPHY **Freddie Spender**



## 1954 W198 300 SL

Regular readers will recall the cover of the July/August issue of *Mercedes Driver*, which depicted two bright red, gull-winged Mercedes cars separated by fifty-six years of history. The older of the two vehicles (the newer can be seen on the following pages) was this gorgeous 1954 300 SL, supplied new to Max Hoffman's luxury European car sales outlet in New York. Back then, the car was painted Racing Silver. It was imported to the UK in 1989, when buyer, Peter Warr (former Lotus Formula One Team Manager), was taken with the car's recently applied Fire Engine Red



paintwork. A subsequent history passing through the workshops of John Surtees Engineering, Ron Waghorn, Tommy Johnston and Omega Motorsport saw a wealth of parts refurbished or replaced. Within the past two years, the car has received a gearbox overhaul, a refresh of the braking system and an injection pump rebuild by HK Engineering in Germany. Fitted with a stainless exhaust and new tyres, this 1950s classic was presented ready to enjoy when it went under the hammer at the Silverstone Auctions Classic Car Sale at the highly anticipated Silverstone Classic event.

## 1987 C126 AUTOSALON

This C126 560 SEC was given the tuning treatment by Miami-based Mercedes modifying outfit, Autosalon, in the late 1980s. Featuring a wide metal body kit, custom bumpers and attractively finished in pearlescent white with colour-coded Ronal split rims, the car's styling is completed by an interior designed and trimmed by Carat at Duchatelet. The 5.6-litre V8 engine has been asked to propel this opulent 1980s gem no more than 17k miles from new, meaning the car's striking bodywork and cabin furniture are entirely unmarked, one of the plus points contributing to a strong sale at RM Sotheby's Auburn Falls auction.



SOLD FOR  
**£88,372**



SOLD FOR  
**£9,435**

## 2000 C209 CLK55 AMG



If you're looking for a sporty Mercedes with plenty of grunt, superior levels of comfort, high specification, rock solid build quality, renowned reliability and a sensible price point, it's hard to ignore what's offered by the C209 CLK55 AMG. As if to prove the point, this X-plater shifted at Anglia Car Auctions for a smidge over £5.5k just before this issue of *Mercedes Driver* went to print. A full service history, all MoT certificates from new until the present day, original manuals, document wallet and a recent service at Mercedes Colindale contribute to a tempting performance package, as the car's new owner will attest. 98k miles covered is no concern for an AMG V8, making this superb C209 CLK one of this month's bargain buys.



## 2000 W210 E55 AMG

Offered with an extensive history file at the Classic Car Auctions August sale, this gold E55 AMG was imported from Japan in 2015. When residing in the Land of the Rising Sun, the car enjoyed the country's metal-preserving climate, meaning this mega Mercedes remains utterly spotless, a boast undoubtedly made possible by only

50k miles covered from new and two careful owners. Part of a private collection following arrival in the UK, this 5.4-litre V8-powered super saloon benefits from a wealth of impressive trim, even by today's standards. Needless to say, the Affalterbach 'house on wheels' didn't have any trouble finding a new owner and a good sale price.



SOLD FOR  
**£5,512**



**UNDER THE HAMMER**

**1988 R107 500 SL**

While Mercedes build quality has often faltered, the durability of the R107 is beyond doubt. The model's production run spanned almost two decades, totalling 237,287 SLs and 62,888 SLCs, many still in service today. This beautiful black 500 SL, complete with automatic transmission, was originally supplied by Derwent of Leeds. Six owners are listed on the car's logbook, but three of those are the same enthusiast! 68,122 miles from new, a pristine soft top, an extensive history file and star turns in various national publications helped to command a sale price nudging thirty grand.



**1984 W123 200**

**SOLD FOR  
£2,145**



This smart two-litre W123 was originally supplied in June 1984 to its first owner, who specified attractive Thistle Green paintwork with dark green cloth interior, optional electric sunroof, electric front windows, wood trim and manual transmission. He kept the car for four years, selling in December 1988 to the chap who offered the fantastically presented four-door at Brightwells September sale. It's a rare treat to find a car from such long-term ownership, but to find one that still looks this good after so many years is rarer still. Evidently very well cared for, this gorgeous green saloon was offered complete with a diary of all and any works undertaken. At little more than £2k, the car was an absolute steal.



**1988 C126 420 SEC**

Far more toned down than the Autosalon SEC featured on the previous page – but no less attractive – this handsome Pajett Red coupe was supplied new by London Road Garage of Romford and was specified with Light Ivory hide. Today, the car's odometer demonstrates no more than 38k miles. As low mileage like this would suggest, this sleek C126 is

in exceptional condition, having been professionally stored as part of this significant private collection since 2011. This generation of SEC is now recognised as an emerging classic, and we reckon this has to be one of the finest examples recently offered. Clearly, bidders at the Silverstone Auctions sale at the Silverstone Classic thought so too.

**BARGAIN  
BUY**





SOLD FOR  
**£203,625**

## 2010 C197 SLS AMG

The second of our July/August cover stars, this ridiculously low mileage (690 miles from new, to be exact) SLS AMG is in showroom condition, complete with striking Le Mans Red paintwork and a full service history, despite hardly seeing any road action. Maintained to the highest standard regardless of cost (or lack of use), the car was one of the star lots at the Silverstone Auctions sale at the Silverstone Classic bash. Between this gull-winged C197 and the W198 on the previous spread, it was difficult to pick a favourite. The buyer of the 300 SL seemed to think so too – he also bought this awesome AMG!



## 1955 W180 220



Nicknamed 'Ponton' (referring to the slab-sided, three-box, overall shape), the postwar range of Mercedes saloons were a radical breakaway from what the company had been producing in the aftermath of conflict, but the popularity of the new cars, plus the introduction of advanced construction and design techniques promoting safety through better impact protection, resulted in production of Pontons constituting almost eighty percent of Mercedes series production between 1953 and 1959. This W180 200 was built in 1955. With its current owner for a year, the car comes with no history file after being imported from the USA. Offering luxury and style in spades, the twin-tone classic features a reliable 2.2-litre engine, manual transmission and a superbly restored body and undercarriage. A newly trimmed interior adds to the sense of elegance, but not even this was enough to secure a winning bid when the car was offered at the Classic Car Auctions August Sale.



SOLD FOR  
**£8,250**

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## C-CLASS

### C180 ELEGANCE AUTO



**1997, 85,000 miles, £1,295.** Immaculate interior, drives superb but wheel arches need slight TLC. Sold with new MoT. Please call 01217 474489 or 07923 252067, West Midlands.  
10500

### CLK 320 AUTO COUPE

**£850.** Silver, new tyres alloys, lowered Eibach springs, new discs and stainless exhaust. No MoT, excellent engine and gearbox. Personal plate, Sony SatNav, new screen and on SORN. Would need to be trailed away. Please call 02392 253900, Portsmouth.  
10424

### W219 CLS 320 CDI



**2008, 81,000 miles, £5,995.** Black leather interior, only full service history, extras include heated electric memory seats, SatNav, cruise, A/C and in absolutely immaculate condition throughout. Please call 01652 678417, North Lincs.  
10445

## SL

### R129 300 SL



**167,801 miles, £4,995.** First registered 1/8/1992 MoT May 2020 full history up to 124 137 in book Plus over £6000 worth of maintenance invoices documenter plus old MOTs etc black/black leather good condition throughout drives excellent PX. Please call 07860 527820, Essex.  
10735

### R107 350 SL



**1973, 95,380 miles, £18,750.** Brand new hood, new water pump, two tone blue exterior, very good condition all round and rust free. Please call 01514 267709, Merseyside.  
9955

### R107 420 SL



**1987, 118,000 miles, £22,999.** The deep blue vinyl interior seats and carpet in this 80's classic complements the crisp white exterior and blue mohair roof beautifully. The exterior and interior of this car are equally as unmolested and in fantastic condition. Please call 01454 501314, Chipping Sodbury (T).  
10625

### R230 SL



**2004, 70,000 miles, £8,499.** Automatic, convertible, petrol, black, full service history, leather interior, keyless entry and start, sat nav, front and rear parking sensors, drivers air bag, power assisted steering wheel and much more. Please call 07545 703474, Southampton<sup>(T)</sup>.  
10716

### W113 280 SL



**1969, 22,000 miles, £69,999.** Automatic iconic convertible, hard and soft tops, power steering, lady owner, all chrome and in good condition, white wall tyres and always been garaged. Please call 07545 703474, Southampton (T).  
10707

## W201

### 190 2.5 D



**1991, 330,660 miles, £950.** Diesel 2.5 saloon, pearl blue metallic, cloth interior fitted, ES roof, EW x4, ABS, MoT March 2020, extensive service history with MoT's, drives well despite mileage. Please call 01516 390149, Wirral.  
9984

## 190E

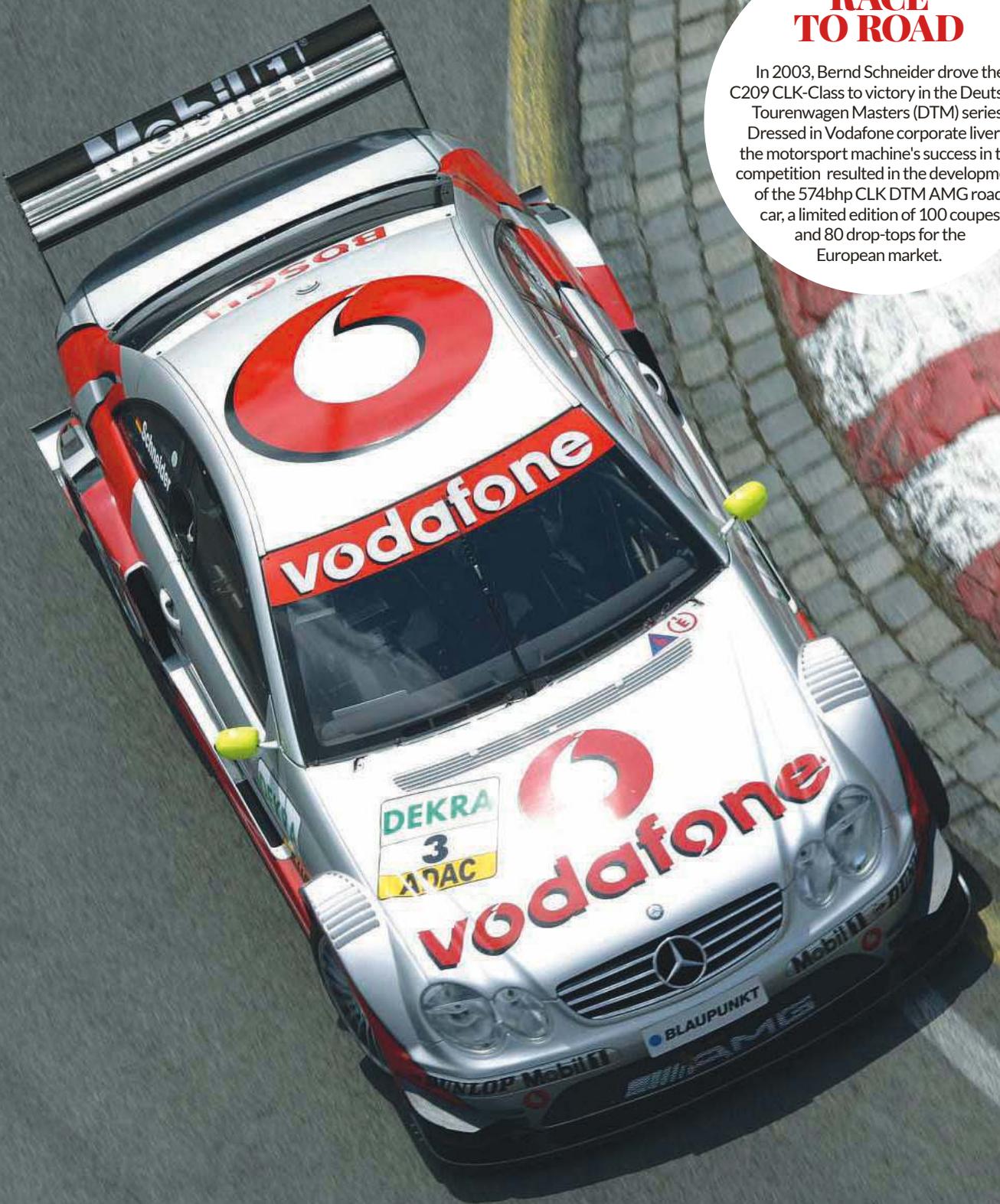


**1989, 204,996 miles, £1,250.** Pristine white, black trim, make good wedding car, had new front wings and springs and full service. MoT till 18-12-19 and no known faults. Large service history file. Please call 01217 436654, West Midlands.  
10729

## RACE TO ROAD

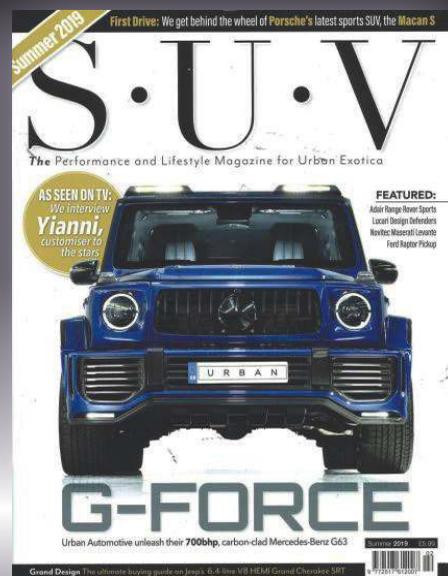
In 2003, Bernd Schneider drove the C209 CLK-Class to victory in the Deutsche Tourenwagen Masters (DTM) series.

Dressed in Vodafone corporate livery, the motorsport machine's success in the competition resulted in the development of the 574bhp CLK DTM AMG road car, a limited edition of 100 coupes and 80 drop-tops for the European market.



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